Commonwealth of Pennsylvania
Office of the Budget

Liquor Modernization Analysis

Based on Governor Corbett's 2013 Proposal

January 24, 2013

The PFM Group
One Keystone Plaza, Suite 300
North Front & Market Streets
Harrisburg, PA 17101
717-232-2723
717-232-8610 fax

Two Logan Square, Suite 1600
18th & Arch Streets
Philadelphia, PA 19103
215-567-6100
215-567-4180 fax

January 24, 2013

Charles Zogby
Secretary of the Budget
Office of the Budget
Commonwealth of Pennsylvania
7th Floor, Verizon Tower
303 Walnut Street
Harrisburg, PA 17120

Dear Secretary Zogby,

In December 2012, Public Financial Management, Inc. (PFM) was retained under the Commonwealth of Pennsylvania's Contract for Advisory Services to provide special research, analysis, and consulting advice to the Governor's Budget Office (GBO) in support of the Commonwealth's development and implementation of legislation to effect the whole or partial privatization of the operations of the Pennsylvania Liquor Control Board (LCB).

As you know, in October 2011 PFM provided to the GBO an extensive report and models related to privatization of the wholesale and retail functions of the LCB. This follow-on report is an extension of that earlier work.

To assist the Commonwealth, PFM researched and documented industry and market information and conditions of the beer industry in Pennsylvania and the current regulation and taxation of the industry by the Commonwealth; modified valuation models prepared for PFM's October 2011 report, enhanced and updated the existing fiscal neutrality model, and developed various scenarios related to privatization of functions. PFM also examined and assessed various product delivery approaches and evaluated different approaches to the licensure of private enterprises to sell brewed, fermented and distilled alcoholic beverages in the Commonwealth. PFM also updated the existing transition plan for LCB wholesale, retail and regulatory operations to support scenarios and fiscal analysis described above. Finally, PFM prepared reports and presentation materials, including this report, to assist the GBO.

Based on this analysis, the PFM project team believes that the Governor's plan will increase consumer convenience and allow the LCB to focus on its regulatory responsibilities. The project team also believes that this can be accomplished in a fiscally neutral way for the General Fund while generating significant up-front revenue that can be applied to key education initiatives.

Sincerely yours,

John F. Cape
Managing Director

INTRODUCTION

Pennsylvania Governor Tom Corbett has presented a proposal to privatize the wholesale and retail sale of wine and spirits while also providing package reform for beer. Combined, these proposals are focused on two equally important goals:

- **Increase consumer convenience** for the lawful purchase of beer, wine and spirits at competitive prices

- **Eliminate the LCB's inherent conflict of interest** by getting them out of the sale of wine and spirits so that they can focus on the critical aspects of regulation and oversight of the alcoholic beverage sales and distribution system within the Commonwealth of Pennsylvania

This effort would **modernize the Pennsylvania wholesale and retail system**. It is notable that about two-thirds of the states use a licensing method for wholesale and retail sales of alcohol, and the trend is toward this privatized approach. Most recently, voters in the State of Washington approved a privatized approach, which reduced the number of 'control states' (which includes Pennsylvania) to 17. There have been numerous states that have moved to a license approach since Prohibition for either/or their wholesale and retail operation. In that time, no state has moved the other direction – from a license approach to a controlled approach.

Public Financial Management, Inc. (PFM) has assessed the proposal developed by Governor Corbett. As part of its analysis, PFM has updated financial models to determine overall valuation of the privatized wholesale and retail system. PFM has also estimated sales in the privatized system and likely state revenue and expenditures to determine the fiscal impact for the Commonwealth. The analysis of these key issues is included within this memorandum.

In October 2011 PFM provided an in-depth analysis of privatization of the wholesale and retail functions of the Pennsylvania Liquor Control Board (LCB), which included a lengthy and detailed discussion of multiple policy options. As a project component of preparing that report, PFM developed models to assess and estimate the impacts of these privatization alternatives. For the current project, PFM has updated those models with more recent sales and other data related to the LCB. As a result, the current analysis includes actual LCB retail sales performance through the end of calendar year 2012.

While updated sales and other financial data are useful, in many areas the existing data and analysis from October 2011 are still relied upon. Given the depth of the analysis done at that time, there are many calculations and conclusions that have not materially changed since that time. PFM has generally relied upon the earlier analysis unless updating is critical for validity of the conclusions. In all places in this report, PFM notes where prior assumptions are relied upon.

GOVERNOR CORBETT'S 2013 PROPOSAL

Governor Corbett's proposal focuses on twin goals of increasing consumer convenience and focusing LCB's efforts on its regulatory and oversight functions. The plan also provides a significant opportunity to provide additional revenue through a process to award wholesale and retail licenses that can be dedicated to a critical state priority, a multi-year block grant program that will invest $1 billion in Pennsylvania public schools.

The current proposal both increases funding for K-12 education and increases consumer access. This is accomplished by a multi-pronged strategy that provides up-front revenue through an auction or negotiation process for wholesale and retail licensees but also provides for a separate licensing process for existing retailers. The following details this multi-pronged approach.

Wholesale Licenses

Wholesale licenses will be negotiated by brand, and the Department of General Services (DGS) will calculate, for every brand of wine and spirits made available through LCB stores, a license fee based on brand valuation. This brand valuation will equal 20 percent of the cost of goods sold (COGS) of the brand over the most recent 12-month period multiplied by 2.5. In essence, this will require wholesalers to remit to the Commonwealth its wholesale profit margin for 2.5 years.

Once a license is issued, the LCB will no longer be able to sell that brand to retail licensees, who will then have to purchase from the wholesaler. The LCB will only be able to acquire product for sale at LCB stores via the wholesaler. The wholesaler becomes the exclusive vendor for that brand in the Commonwealth.

This process will require some change in the current tax structure. As explained in PFM's October 2011 report, the LCB imposes a mark-up and a Johnstown Flood Tax (JFT). Part of the mark-up relates to its wholesale operation, which will now be conducted by the private sector. This portion of mark-up must be 'granted' to the private wholesalers or final product prices provided to consumers will not be competitive.

There are various conditions that will apply to the wholesale licenses. Licenses cannot be transferred, but brand rights can be removed, added (with payment of a license fee for that brand), or transferred (again with payment of a transfer fee). Termination of brand rights is acceptable by agreement, and subsequent transfers are allowable. It will also be necessary for the LCB to develop equitable resolution processes for manufacturer/vendor termination.

Retail Licenses

The retail portion of privatization will include both licensing for existing businesses that will augment their product line (big box retailers, grocery and convenience stores, pharmacies and beer distributors), and an auction process for new stores that will primarily sell alcoholic beverages for off-site consumption.

At the start, **the plan enhances consumer convenience by providing a ready outlet for the sale of beer and wine at existing businesses**. Each of these types of businesses (big box retailers, grocery stores, convenience stores, pharmacies and beer distributors) would have to pay a one-time application fee as well as a yearly license renewal fee (convenience store licenses would be beer sales only, while all others would be wine and beer licenses). However, as long as these types of businesses meet various requirements, licenses would be granted once the appropriate fees had been paid – there would be no limit on the number of licenses that could be issued to qualified applicants.

Besides creating additional consumer convenience through the sale of beer and wine at existing businesses, **the proposal envisions the auction of 1,200 wine and spirits licenses, by county, which will authorize sale of liquor for off-premises consumption.** While the previously mentioned licensing process will involve existing businesses, this component of the plan will focus on stand-alone stores that will primarily sell wine and spirits. It should be noted that existing beer distributors who buy an enhanced license may also participate in the auction for wine and spirits licenses; if they are successful, they could become the only 'one stop shop' location for the sale of beer, wine and spirits.

The 1,200 licenses would be auctioned in two groups based on the size of the store. There will be 800 licenses auctioned for facilities that are greater than 15,000 square feet and 400 that are for stores of less than 15,000 square feet. The auction process will include an allocation of licenses by county based on LCB store historic sales, county population and population density. The licenses will be awarded to the highest bidders for the class of license bid in each county. To provide some assurance of the revenue to be raised from the auction, minimum bids will be calculated by the DGS based on LCB sales data for store and region. Auctions not producing sufficient minimum bids could be performed again.

Store locations will be subject to proximity restrictions (can be denied if near school, playground, church, another licensed establishment), and would be subject to local option by municipalities. Licenses would be transferable to another person, and to another location within the county of origin. No wine and spirits retail licensee will be allowed to hold more than 40 wine and spirits retail licenses within the state or more than 10 percent of the licenses in a county that has 10 or more wine and spirits retail licenses or more than one license in a county with less than 10 wine and spirits retail licenses.

In the PFM analysis of prior retail privatization approaches, it was noted that certain restrictions on how the retail business could be conducted would reduce the value of the license – and, as a result, the up-front revenue to be received at auction. These restrictions could also conceivably reduce consumer convenience and price competition. These included prohibitions on selling gasoline at the same facility, requirements that dedicated cash registers and separate entrance/exits are used for alcohol sales. While these restrictions don't apply to the auctioned licenses (since these are to be stand-alone stores that mostly sell alcoholic beverages for off-site consumption), it is notable that most of these sorts of restrictions for existing businesses (big box, grocery, convenience stores and pharmacies) have not been included in the Governor's proposal.

There are still a few restrictions, such as the requirement that no more than six bottles of wine may be sold at one time in locations other than the auctioned retail locations, which may negatively impact on customer convenience. Overall, however, **this proposal appears to be a net improvement from those in 2011 as it relates to customer convenience.**

VALUATION OF THE PROPOSED WHOLESALE AND RETAIL SYSTEMS

Governor Corbett's proposal assumes that up-front revenue will be obtained from either negotiated or auctioned sale of licenses to conduct wholesale and retail operations within the Commonwealth of Pennsylvania. PFM's October 2011 study identified and analyzed three alternate methods for determining the value of the envisioned wholesale and retail enterprises. As a starting point, it was noted then (and should also be noted now) that providing a valuation for a multi-billion dollar enterprise that does not currently exist in the state is difficult, and the resulting estimates should be treated accordingly. This is a primary reason that PFM uses three separate methodologies – to identify a range of possible plausible outcomes. It should also be understood that PFM believes there is a range of possible plausible outcomes that exists beyond the estimates of these three approaches to valuation.

The following discussion of the three approaches to valuation is based on the October 2011 study. PFM updated that analysis for current sales and future projections, and the actual dollar values are based on updated sales data and the details of the current proposal.

Valuation is largely a function of profit. Profit is influenced by:

- Underlying Price of Goods Sold
- Operating Costs
- Debt and Taxes
- Demographics of the Local Market
- Number and Composition of Likely Competitors
- Current Price of the Product(s)

As noted above, the private sector retail and liquor industry in Pennsylvania does not currently exist, and many of the policy decisions will be based on judgments about what the future will hold. To help understand this 'future state,' PFM created a series of models, based on some broad assumptions, to help inform the potential range of valuation that may result if the market is privatized.

There are many exogenous variables that cannot be modeled with absolute certainty due to market factors and dynamics that result from the creation and composition of retail and/or wholesale licenses. These calculations should not be viewed as an exact science; they are presented to give a general sense of how the private market may look and operate. While other studies have calculated the value of existing store operations, the project team believes that actual valuation will depend on a host of issues not yet resolved. Models are provided as an example of how valuation decisions may be made; they should be viewed given the associated range of risk.

The current valuation analysis uses estimated LCB Fiscal Year 2013-14 retail sales net of taxes as a base. It is assumed that the sales net of taxes will grow at an annual 4 percent rate. If implementation occurs faster or encounters delays, the baseline sales net of taxes may change and impact the associated valuation.

The Governor's proposal envisions auction of 1,200 retail licenses and negotiated sale by brand of exclusive statewide wholesale franchises. The auctioned retail licenses will allow the retailers to sell wine and spirits. However, they will compete in the sale of wine with other license holders (big box, grocery, pharmacies and beer distributors who purchase an enhanced license). As a result, there is less value gained from the auction for those license holders as it relates to the sale of wine. The majority of the value will come from the ability to sell spirits, where no other licensees will be able to serve that market. Of course, there will be some value in being able to sell both wine and spirits, as some customers will value the convenience of being able to purchase both wine and spirits at the same location. However, it is difficult to determine just how valuable that convenience factor is, and it is likely that those competing at auction for these licenses will mostly bid based on their expectations of the level of sales of spirits they can achieve.

This issue of competition does not apply to the wholesale auction, where the distributor will have exclusive rights statewide. This helps to explain why the current PFM estimates for valuation of wholesale are similar to those from the October 2011 study but are significantly reduced for retail.

For purposes of determining valuation, PFM relied on the experience in other states to evaluate the types of operations that would likely make up the 1,200 auctioned license locations. In general, these would likely fall into three categories:

- Stores affiliated with Big Box/Membership Club Stores and Grocery Stores
- Chain Retailers of Alcoholic Beverages
- Small Retailers of Alcoholic Beverages

For modeling purposes, PFM used data from the U.S. Census Bureau and the State of Iowa to examine total sales by type of licensee. The data suggest that in other states, big box stores, membership club stores, and large grocery stores constitute a greater share of total sales than their total share of licenses. Small businesses constitute a smaller percentage of total sales compared to their total licenses.

Of course, this aggregate data includes many states where big box and grocery stores can include their product in their stores with other merchandise. The Governor's proposal does not provide for this for the auctioned licenses. The Governor's proposal is the model in place in a number of states where stand-alone stores are the primary retailer for alcoholic beverages.

It is still possible, however, for big box and grocery stores to build stand-alone facilities that are in close proximity to their general merchandising stores. This model is also found in other states, and this allows the existing big box or grocery store to use its existing supply, marketing and back office functions to reduce overhead and other costs. The PFM analysis assumes that a significant portion of the sales from the auctioned licenses will be comprised of this sort of combined big box and grocery store operation.

Methods to Model Potential Valuation

For its October 2011 study, PFM constructed three valuation models based upon purchased and proprietary data from the industry. The models are:

- Discounted Free Cash Flow (DCF)
- Multiple of Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)
- Multiple of Gross Profit

During the course of the October 2011 analysis, the PFM team interviewed wine and distilled spirits retail industry officials who described their approach to valuation based on a series of factors involving profitability, location, market conditions, demographics, store's overall marketing strategy, competition, etc. Due to the lack of publicly available data, the risk in calculating valuation for an industry that does not exist and – if created – is several years from maturity, the PFM team developed a broad range of estimates that yield expected net profit as an estimate for each type of likely retail licensee.

The actual methodology for each of these approaches and the models that generated valuation estimates are found in the October 2011 study. That methodology is still valid. The following discussion focuses on the results of the valuation estimates based on updated sales forecasts.

The activities and results of individual licensees will vary from these assumptions; however, they reflect a reasonable method of assessing the potential profitability of private sector retail wine and distilled spirits businesses in the Commonwealth. There are many potential licensees, each with their own business plans, in many instances making forecasts for varying timeframes. As a result, all assumptions and the associated results have a significant range of associated risk.

The available mark-up is a significant factor in assessing valuation. The table below shows valuation with the associated weighted average retail mark-up. Any variation – up or down – to available mark-up will have an impact on the associated valuation of licenses.

Mark-up Sensitivity	Number of Licenses	Implied Weighted Average Retail Mark-up				
		15.0%	16.0%	17.0%	18.0%	19.0%
TOTAL	1,200	$367,211,716	$370,404,861	$373,494,229	$376,791,152	$379,984,297

Discounted Free Cash Flow - Wholesale

The valuation estimates use LCB Fiscal Year 2010-11 sales net of taxes as a baseline and then applies growth estimates for following years. Per LCB guidance, it is assumed that sales net of taxes will grow at an annual 4 percent growth rate and that COGS is 69 percent of sales net of taxes.

As proposed, the wholesale industry is likely to operate with a smaller number of competitors in the market. PFM estimates that approximately 10-30 primary wholesalers are likely to exist in a privatized wholesale market. With the likelihood of a more monolithic group of licensees than the retail industry, PFM constructed its models with a focus on the total industry experience as opposed to the nuances experienced by various types of licensees (as in the retail model).

The available mark-up is a significant factor in assessing valuation. The table below shows the valuation with the associated available average mark-up. Any variation – up or down – to available mark-up will have an impact on the associated valuation of licenses.

Wholesale Licenses	Amortization (Years)	Implied Average Wholesale Mark-up				
		18.0%	19.0%	20.0%	21.0%	22.0%
TOTAL	25	$252,832,274	$372,530,356	$494,353,079	$605,991,077	$719,851,020

Multiple of Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) Model - Retail

An industry standard valuation technique is to use a multiple of an entity's EBITDA. Based on industry research, PFM used a multiple of 7.0 of EBITDA to estimate valuation. To calculate, PFM reviewed the trailing-twelve-month Enterprise Value[1]/EBITDA rate for a cross-section of publicly traded retail entities.[2] As additional publicly-traded companies are added or subtracted from the above sample, their results may affect valuation.

Multiple of EBITDA	Estimated EBITDA 2014	Potential Valuation
7.00	**$41,993,598**	**$293,955,189**

Multiple of EBITDA - Wholesale

As with the retail multiple of EBITDA above, PFM performed this calculation based upon the EBITDA from the Wholesale Discounted Cash Flow Model. Based on industry research, PFM uses a multiple of 11.0 of EBITDA to estimate valuation in this method. To calculate this model, PFM reviewed the trailing-twelve-month Enterprise Value/EBITDA value for a cross-section of publicly traded retail entities.[3] As additional publicly-traded companies are added or subtracted from the above sample, their results may affect valuation.

Multiple of EBITDA	Estimated EBITDA 2013	Potential Valuation
11.00	**$57,538,738**	**$632,926,114**

Multiple of Gross Profit Model – Retail

PFM sought to determine the value of up-front payments using a 'rule of thumb' methodology, suggested by some industry representatives, of a simple multiple of gross profit. Based on the breakdown of types of retail stores and their gross profit multiple, the estimated valuation would be approximately $507 million.

Multiple of Gross Profit Model – Wholesale

PFM also sought to determine the value of up-front wholesale payments using a 'rule of thumb' methodology, which was suggested by some industry representatives, of a simple multiple of gross profit. Based on this, wholesale valuation would be approximately $654 million.

Analysis and Associated Risks

Retail

Each model is based on assumptions that result in a range of possible likely results. The model's respective outputs are all within a range to estimate an average valuation for 1,200 retail licenses of approximately $391 million.

However, given all of the variables involved, the limited experience of other states and the subjective nature of any bidding process, there is a significant range of possible outcomes surrounding this estimate. There is insufficient data at this point in time to support a statistical calculation of a risk

[1] Enterprise value reflects the market value of a business and is similar to a theoretical takeover price. It is equal to the sum of market capitalization, debts, minority interest and preferred shares minus total cash and cash equivalents.

[2] Retail Enterprise value/EBITDA data may be found in Appendix M.

[3] Wholesale Enterprise value/EBITDA data may be found in Appendix M.

coefficient, **PFM believes that mitigating factors will likely reduce the actual valuation as it relates to revenues obtained at retail auction, and that the lower range of the estimate, $224 million, is a better figure to use for budgeting purposes.**

Retail Valuation Results			
Discounted Free Cash Flow	Multiple of EBITDA	Multiple of Gross Profit	Average
$373,494,229	**$293,955,189**	**$506,821,398**	**$391,423,606**

Retail Valuation Range of Risk		
Mitigating	Average	Aggravating
$224,000,000	**$391,000,000**	**$510,000,000**

Wholesale

Each model relies on assumptions and results in a range of possible results. **The models' respective outputs are all within a range to estimate a valuation of wholesale licenses of approximately $575 million.**

Given the many variables, the limited experience of other states and the subjective nature of any bidding process, there is a significant range of possible outcomes surrounding this figure. While there is insufficient data to support a statistical calculation of a risk coefficient, PFM believes it is reasonable to plan on a symmetrical $120 million variance – either high or low – from the $593 million average estimate.

Wholesale Valuation Results			
Discounted Free Cash Flow	Multiple of EBITDA	Multiple of Gross Profit	Average
$494,353,079	**$632,926,114**	**$653,849,291**	**$593,709,495**

Wholesale Valuation Range of Risk		
Mitigating	Mid-Point	Aggravating
$474,000,000	**$594,000,000**	**$714,000,000**

The auction process is a complex and intricate endeavor. In an auction for retail and/or wholesale licenses under any privatization option, the Commonwealth is vulnerable to losing up-front revenue. The implementation of an auction strategy is something the Commonwealth would need to pursue in a deliberate and careful manner. A comprehensive and properly structured auction strategy should be part of the Commonwealth's approach to ensure the full maximization of up-front revenue. Given that this isn't generally a core competency for state government, the project team recommends that the Commonwealth seek outside assistance from a firm that has experience in these activities.

The project team notes that some aspects of the auction process as it is currently envisioned could delay system implementation. First, it should be noted that there are two separate auction processes, which will double the time and effort necessary to conduct the auctions. Second, the process includes a best and final offer component, which will also lengthen the time necessary to complete that portion of the process. Finally, the process provides for an additional auction in counties where minimum bid requirements are not met.

SALES GROWTH

There are two related issues that will impact revenue levels for the Commonwealth: how changes in price and convenience may impact the purchase and consumption of wine and distilled spirits. These are complex topics that do not lend themselves to simple rules-of-thumb analysis.

Sales and consumption cannot be used interchangeably for two important reasons. First, a portion of the wine and liquor consumed by Pennsylvania residents is purchased out of state. Studies have suggested that this amount is significant; given a different wholesale and retail system in the Commonwealth, it can be argued that overall sales will grow without necessarily increasing consumption – in this case, some out-of-state purchases will be 'repatriated' and occur in-state in private retail stores. Second, higher income households tend to spend more on wine and liquor but do not necessarily consume more than those in lower income cohorts: in this case, they tend to consume higher priced wine and liquor, which increases the amount of sales rather than the sheer volume of wine or liquor consumed.

Nationally, consumption of wine and distilled spirits has been steady or increasing, both in total gallons and per capita, since the year 2000. Over that period, yearly growth in total gallons sold has averaged 3.2 percent for wine and 3.0 percent for distilled spirits.[4]

The Commonwealth of Pennsylvania has also experienced growth during this timeframe, with consumption of total distilled spirits (9-liter cases) growing from 4.87 million cases in 2000 to 7.05 million in 2011. This represents average growth of 4.1 percent. Wine consumption has also grown, from 6.58 million cases in 2000 to 7.86 cases in 2011, an average growth of 1.8 percent.[5] While growth in the consumption of distilled spirits has been positive in each year since 2000, wine experienced declines in the years 2008 through 2010. While consumption increased in 2011, it is yet to reach the level of 2008 or the peak year to date in 2007.

While the Commonwealth's growth rates have generally kept pace with other control states in recent years, it is still well below average in per capita consumption.[6] For 2011, Pennsylvania's per capita consumption of distilled spirits ranked 39th among the 50 states and the District of Columbia. The ranking was similar for table wine, where Pennsylvania ranked 38th. **Much of this can be explained by purchases by Pennsylvania consumers out of state, as the data on consumption is primarily drawn from levels of purchases within each state.**

In a variety of areas, research has determined that consumers will travel significant distances to make purchases that they believe provide greater value. There is general acceptance that cross border competition is an issue for the Commonwealth as it relates to the purchase of beer, wine and spirits.

[4] The Beverage Information Group, "Liquor Handbook 2012," p. 13 for distilled spirits and "Wine Handbook 2012" p. 13 for wine.

[5] Ibid, p. 26-27.

[6] Ibid. p. 30.

Besides significant circumstantial evidence,[7] a variety of studies have sought to quantify the magnitude of this 'border bleed.' Among the findings:

- A 2010 study commissioned by the Wine and Spirits Wholesalers of America found that 23.6 percent of the wine purchased by consumers in Pennsylvania comes from out of state, **resulting in the loss of $17.3 million in excise taxes.**[8]

- A 2011 analysis by the Distilled Spirits Council of the United States (DISCUS) estimated that cross border purchases by Pennsylvania residents total over 900,000 cases of spirits and over two million cases of wine, **about 16.5 percent of total sales representing approximately $313 million in retail revenue.**[9]

- A 2004 study prepared for the Pennsylvania Food Merchants Association determined that **29.4 percent of the Commonwealth's consumption of wine comes from cross border sales, as well as 20.8 percent of distilled spirits.**[10]

Some research on cross border competition for alcohol suggests that it is generally a bigger issue for beer sales than it is for wine and distilled spirits. A key factor may be the age cohort that tends to prefer beer as opposed to wine and distilled spirits – beer consumers tend to be younger and have less disposable income. For that consumer, traveling several miles for a reduced price may have greater perceived benefit.[11] Of course, that analysis would focus on cross border sales driven by price; while an important factor, other issues, including selection and convenience (such as Sunday sales or expanded hours) may also impact cross border sales for wine and spirits.

Given the extent of studies with similar conclusions – even with dissimilar methodologies[12] - the PFM analysis of changes to levels of sales has in the past focused on expected changes to levels of retail sales based on the correlation between levels of income and expenditures on alcohol. In each case, similar conclusions are reached – there are current cross border sales that are likely to be recaptured with increased customer convenience and selection. The extent of this recapture will depend on a host of factors that cannot be readily modeled.

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[7] It is notable, for example, that Delaware's 'consumption' of alcohol, measured by sales, is among the highest of all states. There is a general acknowledgement within this field of study that when viewing consumption figures Washington DC, Delaware and Nevada are 'outliers' because of cross-border competition and tourism issues. See, for example, William Kerr, "Categorizing US State Drinking Practices and Consumption Trends," International Journal of Environmental Research and Public Health, 2010, pp. 269-283.

[8] "The Effects of Out-of-State Wine Sales in Pennsylvania," Wine and Spirits Wholesalers of America, 2010. According to the report, the analysis was done by John Dunham and Associates, a New York City-based economic consulting firm.

[9] David Ozgo, "Estimated Pennsylvania Lost Cross Border Sales," DISCUS, 2011, p. 3.

[10] "Increased Tax Revenue and Jobs for Pennsylvania," Pennsylvania Food Merchants Association, March 2004. p. 2. The analysis was done by American Economics Group, Inc., a national economics consulting firm based in Washington DC.

[11] T. Randolph Beard, Paula A. Gant, Richard P. Saba, "Border-Crossing Sales, Tax Avoidance, and State Tax Policies: An Application to Alcohol," *Southern Economic Journal*, July 1997, p. 300-302.

[12] John Dunham and Associates built an interstate demand model to reach its conclusions; AEG combined regression analysis with non-linear programming to build a 50 state matrix to account simultaneously for each state's alcoholic beverage inflows from each other state and its outflows to each other state; Ozgo used regression analysis based on per capita consumption in Pennsylvania, other control states and surrounding license states. PLCB used limited sample market surveys.

In any discussion of statewide impacts from privatization, it has to be understood that the Commonwealth has widely differing counties and regions, and the impact will be different depending on location. In particular, key characteristics relating to population density and household income will affect market dynamics in different ways around the State.

A key factor in these discussions is population density, as more densely populated areas generally have more ready access to retail outlets. The size of a market, in terms of available consumers and distance to travel to make purchases, are generally key factors in business location decision-making.[13]

In Pennsylvania, the top 18 counties, in terms of total sales by county, are among the 20 most densely populated counties in the State. The sales from these counties also make up nearly 82 percent of the total sales in the State.

Based on analysis of the key characteristics of the regions, the model PFM developed for its earlier study assumes the following:

- Significant growth in sales, largely through repatriation, will occur in the Southern regions, particularly the South Central and Southeast Regions, to approximate its level of income and population density.

- While there will likely be some additional growth in other regions, there are downside risks as well, particularly around price levels in less dense, less served areas, which are likely to balance out.

- The four most populous regions (Southeast, South Central, Southwest and Philadelphia) currently make up 82 percent of overall sales, and that figure may increase with privatization – as a consequence, the impacts in this region will drive the aggregate numbers for the Commonwealth.

- There is likely to be some price-related sales destruction in the four less populated regions. In these regions, price-related impacts of approximately 5 percent will likely generate declines of approximately 3.5 percent for wine and 4.0 percent for distilled spirits, based on the elasticity of demand for each.

When viewing estimated results related to repatriation and price, it should be noted that there are multiple factors that will impact the timing of these effects, including the phase-in of new retail locations, the types of retail locations and offerings and the number and location of these retailers. It is impossible to model these variances with any degree of confidence; the estimates here are for a

[13] Population density is a useful measure, as distance to travel to purchase/consume is an important factor in a choice of what/where to shop or consume. In retail and similar operations, gravity models are often used to determine the available market and the likelihood to make purchases. A retail gravity model is based on the theory that any consumer's choice of store or activity will be based on two primary considerations - convenience (travel time) and venue attractiveness. Of the two, convenience is generally more heavily weighted.

For a discussion of gravity model's application to alcohol purchase decisions: Room, Robin, "Tsunami or ripple? Studying the effects of current Nordic alcohol policy changes," Paper presented at the 30th Annual Alcohol Epidemiology Symposium of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol in Helsinki, Finland, May 31 – June 4, 2004. Accessed electronically at www.robinroom.net/tsunami.doc fully implemented retail model that provides sufficient locations, hours of operation, products and price to accommodate Pennsylvania consumers and creates a competitive environment with surrounding states.

Based on these assumptions, **the model generated an additional $92.0 million in revenue, largely from cross-border sales in the four most populous regions**. For this discussion, we have assessed the characteristics of the current plan and believe that it will provide similar (and perhaps greater) levels of consumer convenience and price competition than compared to the proposed legislation in 2011. As a result, we have updated the revenue figures within the model but maintained the same percentage growth in revenue associated with repatriation. The project team views this as a conservative estimate with a reasonable likelihood that actual revenue growth related to recapturing cross border sales will be greater than the estimate.

FISCAL NEUTRALITY

When polled**, the Pennsylvania general public has consistently preferred a privatized system for the wholesale and retail sale of alcohol.** At the same time, it is an accepted fact that the LCB system generates significant revenue for the Commonwealth and supports vitally important regulatory functions as well as health and related programs. In fact, the wholesale and retail mark-ups are estimated to generate approximately $556 million in revenue in FY2013-14. In a privatized system, the likely mark-up will accrue to the private wholesaler and retailer. As a consequence, the Commonwealth must reduce expenditures and/or raise revenue from other sources to balance out the revenue provided by this foregone mark-up.

The privatization of the retail system will significantly reduce LCB expenditures, which will go a long ways toward closing this gap. **The PFM model assumes that once all of the LCB retail stores are closed, expenditures for LCB operations will be reduced by approximately $403 million.** At the same time, it is anticipated that there will be some expenditure increases for state police enforcement and treatment and prevention programs in the privatized system. When factoring these into the equation, there is approximately $177 million that must be identified to maintain fiscal neutrality in FY2013-14.

It is notable that the brokered agreement on wholesale licenses, the private auction of wine and spirits licenses, the application fee for obtaining beer and wine licenses and the enhanced license for existing beer distributors will all generate significant one-time revenue. For this discussion, these revenue sources are assumed to be dedicated to funding a block grant program for school districts.

At the same time, PFM suggests that it may be advisable to reserve some portion of one-time revenue to deal with one-time expenditure and timing issues related to the transition to a private system. One option for doing this would be to use the initial non-auction license application fees for these General Fund-related expenses.

If one-time revenue sources are removed from the discussion of on-going fiscal neutrality, the following are logical options for closing the approximately $177 million gap to achieve fiscal neutrality:

- Charges for LCB regulatory activities, including those necessary to issue licenses and permits

- Annual fees for license renewals
- Additional sales, corporate income and individual income tax revenue related to taxing for-profit wholesale and retail entities

Consistent with the Governor's proposal (and with the analysis conducted in the previous study), PFM determined that LCB activities associated with regulation of the privatized system would be borne by wholesale and retail licensees – this is a generally accepted best practice for industry regulation. PFM also determined that the privatized industry will create profits that will yield additional tax revenue, and these were also incorporated into the fiscal neutrality model.

With the remaining gap, PFM developed a license fee approach that primarily relies on license revenue to attain fiscal neutrality. In this approach, qualified license holders for beer and wine would pay varying annual fees to maintain their license. Holders of the auctioned wine and spirits licenses would all pay the same amount for renewal of their licenses. Coupled with regulatory assessments and additional tax revenue, the State would be able to attain fiscal neutrality. The rates are detailed below:

Wine/Spirits Licenses	# of Licenses	Initial Fee	Annual Renewal Fee (Mon-Sat)	Sunday Sale Fee	% take on Sunday sales
Big Box/Grocery	400	$0	$2,500	$2,000	75.0%
Chain/Large Independent Liquor Store	375	$0	$2,500	$2,000	75.0%
Small Business	425	$0	$2,500	$2,000	75.0%
Total	**1,200**				

Beer / Wine Licenses	# of Licenses	Initial Fee	Annual Renewal Fee (Mon-Sat)	Sunday Sale Fee	% take on Sunday sales
Big Box	100	$35,000	$35,000	$2,000	75.0%
Grocery A	1,200	$30,000	$30,000	$2,000	75.0%
Grocery B	1,200	$25,000	$25,000	$2,000	75.0%
Convenience	800	$10,000	$10,000	$2,000	75.0%
Pharmacy	1,700	$17,500	$17,500	$2,000	75.0%
Total	**5,000**				

Enhanced Beer Ds	# of Licenses	Initial Fee	Annual Renewal Fee (Mon-Sat)	Sunday Sale Fee	% take on Sunday sales	% take of beer enhancement license
Beer Ds	1,000	$150,000	$10,000	$1,000	75.0%	75.0%

Based on these fees, the following details the revenues raised from this approach:

Item ($ in thousands)	2014 PLCB Baseline	Privatization Alternative	Difference
LCB PROGRAM REVENUE			
LCB Mark-up	$556,000	$0	($556,000)
License Fees, Fines, etc.	$13,000	$138,250	$125,250
Interest & Investment Income	$0	$0	$0
Misc. Income	$3,000	$0	($3,000)
Transfer Fees	$0	$0	$0
Wholesale Regulatory Fee	$0	$0	$0
Retail Regulatory Fee	$0	$20,000	$20,000
Subtotal	**$572,000**	**$158,250**	**($413,750)**
STATE TAXES APPLIED			
Johnstown Flood Tax (18%)	$323,000	$335,000	$12,000
Off-Premise Sales Tax (6%)	$127,000	$132,000	$5,000
Gallonage Tax - Spirits	$0	$0	$0
Gallonage Tax - Wine	$0	$0	$0
Sin Tax: Wholesale	$0	$0	$0
Sin Tax: Retail	$0	$0	$0
C-Corp (9.99%)	$0	$1,900	$1,900
S-Corp (3.07%)	$0	$500	$500
Subtotal	**$450,000**	**$469,400**	**$19,400**
TOTAL REVENUE	**$1,022,000**	**$627,650**	**($394,350)**
LCB & RELATED EXPENSES			
General Fund Profit Transfer	($80,000)	($80,000)	$0
LCB Operations	($438,000)	($35,000)	$403,000
PSP Enforcement	($22,000)	($27,000)	($5,000)
Treatment and Prevention Programs	($2,000)	($3,520)	($1,520)
TOTAL EXPENSES	**($542,000)**	**($145,520)**	**$396,480**
STATE FISCAL IMPACT	**$480,000**	**$482,130**	**$2,130**

There are, of course, alternate variations that can be generated using these (and other) revenue alternatives. However it is accomplished, it appears likely that fiscal neutrality will require additional revenues to be generated from those participating in the system, and some portion of that additional revenue will have to be made up from reduced profits, operational efficiencies and/or increased prices.

The prior PFM report discussed this subject at length, particularly as it relates to the open market approach, which the Governor's proposal largely incorporates. As it relates to these proposals, PFM has updated its pricing model to reflect recent results.

The price model simulates the impact of markups, taxes and other charges on a sample product under the current LCB pricing structure and an estimated privatized pricing structure. For comparability, the model simulates the price of a sample product, which is the average weighted cost of wine and liquor units that were sold over a 52 week period. Additionally, for comparison purposes, average markup and tax burdens were used, although the impact of taxes, fees and markups on individual product prices will vary due to a variety of factors. When the project team ran the current proposal through the price model, it resulted in a statistically insignificant change in aggregate prices compared to the baseline.

There are factors that may mitigate aggregate price inflation in a privatized market, both at the wholesale and retail level:

- Wholesalers will face pressure from manufacturers to increase customer accounts and product sales volumes, which may result in discounting and promotions that reduce wholesale aggregate markup.

- High density and high sales areas will have a significant number of retail licensees, including retailers who live on tight margins but are profitable because of high sales volume (for example, 'big box' stores or grocery chains). In these areas, retailers will have limited pricing power due to competitive conditions, especially on high volume items, which are traditionally deeply discounted to near cost by many chain retailers. This will significantly reduce aggregate margins.

- Currently, 18 counties make up approximately 82 percent of total sales in Pennsylvania. These 18 counties are among the top 20 counties in population density. There is a strong expectation that these will be the counties most likely to experience competitive price pressures. As a result, for the majority of sales in Pennsylvania, the product prices will be at or slightly lower than the results from the static model.

There are also factors that could aggravate aggregate price inflation in a privatized market, both at the wholesale and retail level:

- Wholesale competition may be limited by the small number of companies who tend to dominate this market, and/or by policies that offer exclusive statewide agency on a brand basis. As a result, companies could feel less pressure to increase product volumes through price reductions.

- Wholesale competition is strong and therefore reduces their negotiating leverage with manufacturers thereby increasing manufacturer pricing, which is ultimately passed on to the consumer.

- Overly restrictive privatization regulations that limit license access to low margin retailers, for example 'big box' and specialized retailers or grocery chains.

It is notable that the PFM pricing model from the October 2011 study envisioned a license structure with a $10,000 annual retail license renewal fee and $10,000 annual Sunday sales license renewal fee. By contrast, the current proposal has lower annual renewal fees for the wine and spirits licenses but generally higher renewal fees for beer and wine.

Based on the current taxes and fees, it is envisioned that the license approach will have a statistically insignificant impact on aggregate prices.

TRANSITION PLANNING

As noted above (and covered in detail in the October 2011 report), there will be significant transition issues in the move to a privatized system. While the order in which aspects of the transition may be modified as circumstances warrant, the following are suggested recommendations to ensure an orderly, cost-effective transition while also supporting the goals of achieving greater customer convenience and fiscal neutrality.

- **First conduct the process for licensing qualified applicants for retail beer and wine sales.** These are big box, grocery, pharmacies and beer distributors (for beer and wine licenses) and convenience stores (for beer licenses) who will, in nearly all instances, be stores that are already in operation, have already been licensed and/or permitted by the State and have a record of doing business in the Commonwealth. This should help expedite the application process and provide the earliest opportunity to attain greater customer convenience. PFM estimates that this process could be accomplished (subject to sufficient staff and resources being dedicated) within six months of the bill's enactment.

- **Next Conduct the Auctions for Wine and Spirits Licenses.** This process is more involved and will also give the businesses in question the time to prepare facility plans, secure financing and determine the likely value of the license for purposes of bidding at auction. As the process envisions the possible need for multiple auctions, it is likely to be more time consuming than the licensing process in the first step. As the businesses are likely to be new businesses, the application investigation process is also likely to require more time. This portion is likely to require significant staff and resources; if those are available, the auction process should be underway within six months and could be completed within one year of enactment of the bill.

- **Finally, Broker the Sale of Wholesale Franchise Arrangements.** This step can be undertaken during the Auction process for retail wine and spirits licenses. Given the smaller number of negotiated agreements, the process should be able to be completed near or shortly after the completion of the retail auction process.

- **Ensure that LCB Stores are Closed as Auction Stores Open.** As licenses are awarded, LCB stores in that market should be put on notice of starting date and be required to close within close proximity to those dates absent exigent circumstances. There should be sufficient lead time and notice (particularly in high density markets) to close stores in a way that is cost effective for the Commonwealth.

Based on this, it is likely that retail license revenue for beer and wine licenses and beer distributor enhanced licenses will be generated in the first year of the proposal. Retail auction revenue will likely be generated either late in the first year or the second year of the proposal. Wholesale negotiated sale revenue will likely be generated later in the second or in the third year of the proposal. The savings from closing of LCB retail stores will largely occur in the second and third year of the proposal.

SUMMARY

Governor Corbett has put forward a plan to privatize the wholesale and retail sale of wine and spirits in the Commonwealth of Pennsylvania. This proposal aims to increase consumer convenience and focus the work of the LCB on the regulation of the industry and businesses that are engaged in the sale of alcoholic beverages. In doing so, Pennsylvania would join the vast majority of states that license, rather than control these activities.

PFM has analyzed the proposal and its similarities and differences to proposals put forth when PFM produced a privatization report for the Commonwealth in October 2011. In general, the Governor's proposal conforms with recommendations for an auctioned wholesale and open market approach to retail contained within that earlier report. PFM used that report, with updated sales and other data, to re-run models related to system valuation, sales and prices.

According to those updated models and analysis, the Governor's recommended system should:

- **Provide significant up-front payments for the Commonwealth**, particularly for the negotiated agreements on the wholesale side of the operation. **PFM's models suggest that the range of results for this portion of the plan will range from $494 to $654 million, with a mid-point in that range of $575 million.** While there is also value in the auction of retail licenses for wine and spirits, there is greater uncertainty in that auction because of the number of participants and the lack of exclusivity of sales of wine. **The expectation is that the retail auction will yield in the range of an additional $225 million.**

- **Provide sufficient access and competition to ensure customer convenience and reasonable prices.** While there may be some price increases in markets with fewer retail sales locations, the vast majority of the sales will likely take place in a relatively small number of counties with population density and access to multiple retail locations. In these areas, it is likely that prices will be competitive, particularly for high volume items.

- **Attain fiscal neutrality** through a combination of license and regulatory fees and assessments as well as additional income and sales tax revenue generated by the privatized system.

While the recommended privatization should help modernize the State's system, the resulting transition period will be challenging – the licensing of what are likely to be thousands of businesses to sell beer and wine as well as the auction of 1,200 licenses to sell wine and spirits will be time consuming and will likely overwhelm the existing LCB staff. Given that these are largely one-time functions with (in the case of designing and running the auction) specialized requirements, it would make sense to seek outside assistance to ensure an orderly and effective transition. Likewise, the planning and activities to close down the current LCB retail stores will require significant time and attention – another area where the Commonwealth may benefit from outside assistance.