



POLICY BRIEF: INDUSTRIAL REVENUE BOND PROGRAM

Executive Summary

This policy brief by the Urban Manufacturing Alliance takes an in-depth look at the Industrial Revenue Bond (IRB) Program, a federal financing tool providing qualified manufacturing projects with access to tax-exempt debt. Because of restrictive and somewhat outdated program requirements, there are few manufacturers that are eligible to finance their projects as this tool was originally intended. And in particular, the program seems ill suited to the financing needs of the growing sub-segment of U.S. manufacturers – small urban manufacturers (SUMs). This Policy Brief will describe the IRB program's intended goals, explain how it works, review its historic usage, examine its relevance in light of ongoing growth in urban manufacturing, and propose changes that would make IRBs more accessible and attractive to SUMs, and thereby advance city, state and federal efforts to create well-paying manufacturing jobs.

Summary of Key Findings

- Qualified private activity bonds are not easy to access; the combination of high transaction costs with low ceilings on debt means that the benefit they provide is sometimes marginal.
- Total issuance of qualified private activity bonds has been declining since 2007. IRBs' share of total private activity bond issuance, has also been declining, and at a greater rate, since 2007.
- The IRB Program has not kept pace with the restructuring of the manufacturing sector that has occurred since the IRB Program was last updated in 1984 and does not now meet the needs of today's manufacturing. Some restrictions on eligible uses for IRBs make it difficult or impossible to use them to develop the types of modern spaces that are most needed by small urban manufacturers:
 - Not-for-profit and for-profit developers of multi-tenant industrial space cannot use the program without being subject to the \$20 million capital expenditure rule aggregated for all tenants which makes it very difficult to use the bonds for rental properties.
 - Manufacturers that wish to purchase condominium or cooperative units in a larger manufacturing facility cannot use the program.
 - IRBs may not be used for flexible manufacturing space (where the percent of space allocated to direct manufacturing activities may fall below 75%), whereas today's manufacturers, many of whom are smaller, may shift activities frequently and require more flexible space that combines multiple business functions, including warehousing as well as direct production.
 - Urban areas allocate qualified private activity bond volume cap for housing, which is an allowed IRS usage, in greater percentages than for manufacturing usage. If ever the program were to gain more popularity and accessibility among manufacturers, competition with already well-utilized housing programs could be problematic.
 - The tightening of the financial markets and the limited ability and desire of entities to borrow over the past several years has also had an impact on the IRB program usage. Still, the economic environment notwithstanding, the program parameters themselves seem to be a very large impediment, even without larger economic factors, limiting the usage of the program and its ability to assist manufacturing entities as intended.

I. Introduction

Reversing a 30-year trend, employment has begun to increase in the U.S. manufacturing sector, and there is growing popular and political recognition of the importance of manufacturing to our country's basic economic wellbeing. Historically, this sector had been losing jobs; from a high of approximately 19.4 million jobs in 1979, the sector lost approximately 8 million jobs and reached a low point of 11.5 million jobs by February 2010. Part of this decline had been due to overseas production and automation, as well as other macroeconomic factors affecting the U.S. workforce. However, by the middle of 2012, manufacturing employment had risen by approximately 500,000. A March 2012 Brookings Institution report found that metropolitan areas surpassed their pre-recession rates of export sales growth, with manufacturing leading this growth, particularly in Midwestern and Northeastern urban areas. Research by Brookings and other analysts confirm that manufacturing is undergoing not only a quantitative reversal of long-term decline, but also a qualitative transformation that calls for a rethinking of industrial policy at the city, state, and federal levels.

Today's manufacturing sector is structured differently in many ways from US manufacturing of 20 or 30 years ago. Small firms forming production networks located close to end consumers, particularly in urban areas, are one important trend. The shift from large, vertically-integrated factories to clusters of small, innovative firms able to quickly respond to technological and market changes is driving the resurgence of urban manufacturing; American cities offer many advantages to these new, nimble firms. But supporting their continued growth will demand innovative approaches to industrial development planning and financing. In 2012, industrial advocates, economic development professionals and academics from 13 cities came together to form the Urban Manufacturing Alliance (UMA), to share lessons learned and advance policies at the federal and local levels that can support the growth of manufacturing in cities across the country.

This policy brief is part of a UMA series exploring various strategies to support urban manufacturing, and it builds off the findings of two recent reports issued by the Pratt Center for Community Development based in Brooklyn, NY. In 2011, the Pratt Center and The Brookings Institution released "The Federal Role in Supporting Urban Manufacturing," which highlighted the opportunities and challenges for small, urban manufacturers and recommended ways to alter outdated national manufacturing policies. The Pratt Center followed with the 2013 release of the "The Brooklyn Navy Yard: an Analysis of its Economic Impact and Opportunities for Replication" which examined the opportunities to rep-

licate key elements of the Brooklyn Navy Yard, a successful 300-acre, publicly-owned, modern industrial park, by rehabilitating older industrial facilities in U.S. cities for multi-tenanted operations by non-profit or local development corporations. Both reports recommend changes to enable federal policies to better support urban manufacturing, and address barriers to the utilization of existing programs that now exclude or inhibit participation by small and mid-sized manufacturers seeking to locate or expand in urban settings.

This brief takes an in-depth look at one federal program – the Industrial Revenue Bond (IRB) Program that is a subset of Qualified Private Activity Bonds. The goal is to explain the IRB Program, review its historic use, and examine its relevance in light of ongoing growth in urban manufacturing. The paper explores how existing program parameters are hindering its usage in urban settings and for multi-tenanted manufacturing buildings, and provides recommendations on changes that could spur greater usage by urban manufacturers.

II. Program Background

Industrial Revenue Bonds (IRBs, aka Small Issue Manufacturing Bonds) are a type of "qualified private activity bonds" which comprise a sub-sector of the tax-exempt bond market. Tax-exempt bond financing is a form of raising capital that is most commonly used by governmental entities. For instance, when a municipality wants to put in a new sewer line or pay for the construction of a new public school, it may turn to bond financing as a means to raise the required capital for that cost. Just like governmental municipal bonds, qualified private activity bonds are issued by state or local governmental entities, but unlike other municipal bonds, qualified private activity bonds benefit private users that perform an important public service or achieve a public goal, such as non-profit institutions, solid waste recyclers, developers of multi-family affordable housing, or manufacturing entities. The Internal Revenue Code (IRC), which governs the tax-exempt status of bonds, has set requirements that allow certain private entities to have access to this financing mechanism and only under specific circumstances. Manufacturers are among the qualified group of private entities that may access the program. So, if for instance, a manufacturer wanted to purchase or renovate a facility, if it met other program requirements, it could use tax-exempt bonds as a part of its overall development-financing plan.

What is the benefit of tax-exempt bonds? While interest paid on bonds issued by most private companies is typically taxable, the IRC allows the interest on IRBs and other Qualified Small Issue Bonds to be exempt from federal, state and local income taxes. This tax-exemption provides a significant benefit to the bond investor (who pays no taxes on interest income), part of which is passed onto the borrower in the form of a lower interest rate.

Besides having tax-exempt interest, bond financing can be an attractive alternative to a borrower in that bond investors typically offer longer financing terms and alternative covenants from what a bank may offer. That being said, banks are active investors in the tax-exempt bond markets, directly purchasing manufacturing bonds from local issuers, and allowing more traditional debt structures (e.g. shorter terms with lower loan to value ratios) to carry tax-exempt interest rates. On the downside, bond financing is a more costly and complex financing mechanism that often involves more parties, higher transaction costs, and longer closing timeframes than traditional debt.

Origin and Evolution of IRBs in Legislation

The issuance of tax-exempt bonds for industrial development purposes stretches back to the early development of the capital markets. The Internal Revenue Service (IRS) ruled on industrial development bonds as far back as 1936. The purpose of these early issues was to attract small industry to low income and underemployed communities. Over the next several decades, the IRS and Congress became increasingly concerned about the impact of IRBs on municipal finance in general and in particular on their effect in increasing interest rates for governmental borrowers. In 1968, Congress passed legislation regulating the taxability of industrial revenue bonds, and generally set forth the construct that is still used today – that except for certain activities and small issues (those under \$1 million) or for borrowers meeting a \$5 million capital expenditure limit (later raised to \$10 million in 1978, which is the limit still used today), industrial revenue bonds are taxable. These rules reflect Congress and the IRS's intent to limit the program to small industrial businesses that were creating new economic activities. When the IRC was amended further through the Deficit Reduction Act of 1984, additional categories and structures of tax-exempt bonds were disallowed, including structures that permitted unrelated borrowers to fund a single project facility through dividing that project facility into condominium units.

MECHANICS OF INDUSTRIAL REVENUE BONDS

The Internal Revenue Code allows states, municipalities or their instrumentalities to issue Industrial Revenue Bonds and to lend the proceeds of an issuance to an eligible borrower – a manufacturer - for use in a qualified industrial facility project. The user repays the issuer, who in turn repays the buyers of the bonds. Below are the steps in the IRB issuance process:

1. Issuer (state or local government or instrumentality) requests information on project through intake or application process.
2. Issuer and its bond counsel (special counsel that delivers an opinion on the legality of each issuance) determine the private user's eligibility for tax-exempt bond status.
3. Once eligibility has been determined, the issuer and the manufacturer work with an investment bank and/or broker dealer to sell the bonds to investors. There are many ways to sell bonds; public offering and private placement being two strategies, and these decisions are made between the issuer, the manufacturer and the banker. IRBs are often sold as private placements.
4. The Securities and Exchange Commission regulates the sale of the bonds and the actions of market participants, including investors, investment banks/broker-dealers and financial advisors.
5. Once the investment banker or broker-dealer has secured an investor for the bonds, the municipal issuer will enter into either a loan or lease agreement with the manufacturer as a means of transferring the funds from the issuer to the manufacturer. The manufacturer, through that agreement, makes promises to repay the debt according to amortization schedules outlined in the documents.

Key Program Rules

The IRB program regulations can be complex and for the most part are intended to limit access to the program and to ensure that users are smaller companies devoting a high percentage of their individual facilities to traditional manufacturing and production activities. Some of the rules have been in place for decades, including the \$10 million issuance limit established in 1978 and the \$40 million total outstanding bond limit established in 1984. Critical program regulations are outlined below.

Manufacturing Facilities:

The IRC stipulates that in order for a private industrial entity to benefit from the program, bond proceeds must be applied to “manufacturing facilities,” which it defines as a facility used in the production of tangible personal property. Facilities that are not directly used for production, but for ancillary uses, like storage and administration, may also be financed with bonds provided that those facilities are located on the same site. Not more than 25 percent of net bond proceeds may be used to finance such ancillary facilities. As a part of the American Recovery and Reinvestment Act (ARRA), in 2009 the IRC expanded the definition of manufacturing facilities to include laboratories and other new technology manufacturing processes. There was at least one transaction in Illinois that was financed under the expanded definition. The allowances to finance new activities under the expanded definition of manufacturing have since expired.

Limits on Value of Bonds Issued and on Total Capital Expenditures Per Project and Per Borrower:

Program regulations set a limit of \$10 million on the value of bonds per issuance, a \$20 million limit on total capital expenditures from all sources during a six-year window (including three years before the date of issuance and ending three years after the date of issuance), and a \$40 million aggregate limit on the total outstanding bond debt per borrower. Total project costs may exceed \$10 million, but must be less than \$20 million from all sources, see below.

Limitations on Acquisition of Land or Other Property:

The IRC requires that IRB issuances must not apply greater than 25% of net bond proceeds (the amount the borrower receives after transaction expenses such as banking, legal, financial advisory, rating agency, and other fees incurred in conjunction with the bond issuance) to acquisition of real estate.

State Volume Cap Limit:

IRBs as well as some, but not all other forms of, Qualified Private Activity Bonds are subject to state volume cap limits on the total amount of bonds issued. The cap

was imposed to limit the extent to which the issuance of tax-exempt bonds reduced the total revenue that could be collected by the federal government from investor income. The volume cap limits are set by a federal formula; 2013 limits are the greater of \$291,875,000 or \$95 per capita for each state. Every year, states make policy decisions regarding the priority of manufacturing versus housing, as well as other projects with volume cap requirements, in the allocation of this limited resource.

Aggregation Rules in Multi-Tenant Facilities:

In calculating the \$20 million capital expenditure limit, the IRS requires the capital expenditures of principle users of the facility - any person who leases more than 10 percent of a project based on square footage or rental value - to count towards the limit. This has a significant impact on developers' abilities to aggregate tenants into a qualified project as first, it is difficult to require tenants to keep within these requirements, and second, in high cost environments/ sectors, the \$20 million cap is easily exceeded, especially in large urban legacy buildings, which often require subdivision to accommodate small firms, and significant investment to upgrade building shells and systems.

Other Requirements:

There are other regulations to which IRBs, as well as other forms of qualified private activity bonds, are subject. These include the requirement for a public hearing for each borrower/project, restrictions on use of proceeds to acquire existing property without substantial renovations/rehabilitation (renovations must equal at least 15% of the cost of the building not including land cost), restriction on average life of bonds, prohibition on advance refundings, restrictions on accelerated depreciation, prohibition of federal payment guarantees (making the SBA 7a and 504 programs incompatible with tax-exempt IRB programming), and limits on the amount of bond proceeds that may be applied to pay for cost of issuance. In addition, the IRC prohibits users of the financed facilities from receiving tax-exempt interest income as a holder of these bonds.

Given the evolution of urban manufacturing towards greater customization, the rising costs of real estate in cities, and the large proportion of urban manufacturers who rent their space, the IRB regulations over time have effectively limited the program's usability in urban areas. However, there are still instances of the program assisting companies in areas that enjoy relatively lower real estate costs, such as for the acoustic guitar manufacturer located in Bend, Oregon, whose IRB issuance story follows.

SAMPLE TRANSACTION FROM OREGON

In 2007, Business Oregon, the State of Oregon's industrial revenue bond issuer, provided \$2.6 million in bond financing to Breedlove Guitar Company, a manufacturer of acoustic guitars. With the financing, Breedlove Guitars was able to move into a new production facility. Its total capital expenditures over the six year period including the bond issuance, was less than \$20 million, and the company had no other facilities or bond issues against which to measure the \$40 cap. That year in Oregon, approximately \$31 million was issued for manufacturing entities. The total volume cap in Oregon for 2007 was approximately \$315 million.

Historic Program Usage—Overall Declines Since 2007

There is a lack of available issuance data for the IRB program, making usage analysis difficult. While there are mandatory reporting requirements for authorities issuing tax-exempt bonds, the data from these forms is not readily available to the public or aggregated in any reporting through the IRS or other federal entities. In addition, many of the bonds issued for manufacturers are un-rated, privately placed transactions, not subject to secondary reporting requirements. Finally, the manufacturing category of bonds often gets lumped in with other categories of tax-exempt bond financings, such as not-for-profit transactions and/or solid waste recycling projects. These factors result in there being a lack of reliable, available data on the number of and dollar volumes issued for closed and/or active manufacturing bond issues through the IRB program. A private organization, the Council of Development Finance Agencies (CDFA), has gone to issuer level sources to aggregate usage information to the best of its ability, and its program activity reports represent one of the most comprehensive sources of data on the program, its mechanics, and its usage. The table below, using CDF data, shows the total volume in millions of dollars issued under the program by state between 2006 and 2011. In general, program usage has been declined from a high of over \$3 billion in 2007 to under \$400 million in 2011. The last column shows the percent decrease in 2011 volumes from the average volume issuance between 2005 and 2011. It is likely that the decline reflects both the general tightening of credit and reluctance of businesses to take on debt in the wake of the financial crisis and the recession. It is also likely that low interest rates on capital from other sources have made IRBs relatively less attractive, particularly given the restrictions on the program

described above, and also given the inherently high transaction costs of bond financing compared to other vehicles.

Volume Cap Allocation Variability

As mentioned above, in the Deficit Reduction Act of 1984 and again in the Tax Reform Act of 1986, volume cap regulations were put in place to limit the amount of IRBs and other qualified private activity bonds in the market. These bonds had been growing by 50% per year through 1982, and Congress felt they were negatively influencing yields in the municipal bond markets. Volume cap is provided on a state-by-state basis, and is calculated as the greater of a federally determined floor or a per capita amount of bonds that may be issued in any given year. If a state does not use its entire volume cap within the year it is earned, that state may "carryforward" the unused cap, with certain restrictions. IRBs are one of the bond categories that are not allowed to use carryforward cap unlike some other forms of qualified private activity bonds.

Figure 2 on the following page shows that for the top 12 most urban states (according to the 2010 Census), on average, bond proceeds are more likely to be used for affordable housing than for manufacturing facilities. Local program structuring, marketing, and prioritization of manufacturing versus housing or other private activity bonds subject to volume cap are key determinants in the usage story. This results in significant variability in the allocation of volume cap among user categories. However the recent trend has been for states to carryforward millions of unused volume cap, as the demand for the IRB program, as well as for other categories of volume cap bonds, has been weaker than the federal allowance under the program. Should the demand for these bonds increase at some future point, whether due to market conditions or whether the result of relaxed program requirements, industrial policies may want to consider a carve of out some percentage or sub-allocation of volume cap for the manufacturers.

Figure 1

STATE	2005	2006	2007	2008	2009	2010	2011	TOTAL	RATIO OF 2011 USAGE OVER 7-YEAR AVERAGE USAGE
Pennsylvania	75.7	76	197.7	161.8	40	77.2	40.4	670.4	(58%)
Indiana	46.8	81.4	108.7	29.9	201	10.9	18.5	502.33	(74%)
Virginia	10	18.2	134.7	n/a	170	115.8	1.5	457.10	(98%)
Illinois	216		148.2	n/a	24	20	0	436.92	(100%)
Georgia	49.8	23.3	245.1	31.3	12.5	36.7	19	427.15	(68%)
Wisconsin	21.6	59	143.5	69	35.6	46.5	9.8	387.47	(82%)
Michigan	36.6	66	176.1	57.4	1.7	19.8	4.4	373.47	(91%)
Massachusetts	26.7	43.9	57.4	97.9	18.6	101.2	9.9	360.89	(81%)
California	25.3	34.6	97.7	118.3	20	45	13.7	357.42	(73%)
Louisiana	47.4	118.2	66	112	0	0	0	344.35	(100%)
West Virginia	4	21	140	0	115.4	0	2.7	291.02	(93%)
New Jersey	43.1	46.5	84	44.4	39.8	n/a	0	258.11	(100%)
Florida	53.6	31.1	60.4	52.9	19.8	n/a	29.7	247.27	(28%)
Missouri	38.9	26.3	77.3	54.3	20.7	10.5	13.2	241.41	(62%)
Ohio	25.4	45.5	101.2	35.9	21.3	3.2	2.5	235.11	(93%)
Kentucky	11.6	16.1	44.7	71.2	71.4	n/a	0	217.76	(100%)
Maryland	8.1	17.6	103	38.6	9.1	17.9	0	199.90	(100%)
New York	21.5	33.6	126.5	n/a	n/a	n/a	12.2	197.13	(75%)
North Carolina	43.3	11	103.1	18	6.1	0	4	190.64	(85%)
Tennessee	9.9	57.8	66.3	17.5	28.8	0.9	4.1	189.23	(85%)
Nevada	0	4.6	100	n/a	n/a	46.1	n/a	171.44	NM
Nebraska	2	52.7	45.5	18.1	5.5	10	13.1	171.63	(38%)
Kansas	17.5	21.1	41.7	45.1	7.2	3.3	3.8	139.58	(81%)
Wyoming	0	125.5	11.2	0	0	0	0	134.79	(100%)
Alabama	4.1	18.6	49.2	28	16.8	12.6	7.2	140.60	(63%)
Washington	14.4	28.3	59.7	18.4	3.5	6.9	0	132.74	(100%)
Arizona	0	2.5	16.1	2.2	0	4.2	100.6	129.18	461%
South Carolina	7.4	26.9	70.7	8.9	0	7	3.3	126.59	(81%)
Texas	7.2	0	19.4	40.9	16	3.4	13.3	98.91	(7%)
Utah	2.5	11.6	30.7	32	6	9.8	5.5	103.25	(61%)
Maine	34.1	9.2	36.7	13.4	0	0	0	94.02	(100%)
Minnesota	17.1	0	44.4	14.8	4.8	0	4.8	82.56	(61%)
Colorado	12	2.6	52.7	n/a	n/a	4	9	98.79	(44%)
Iowa	8.5	9.1	41.6	2	0	1.4	4.6	68.89	(52%)
Connecticut	0	0	54.5	0	0	0	4.4	57.90	(48%)
Arkansas	0	2.2	21	0	8.8	17.1	8.5	66.09	3%
Oregon	3	3.7	30.9	3.7	4	6.3	6	64.96	(27%)
Vermont	3.3	4.3	15.2	10.5	9.5	3.9	2.5	51.04	(64%)
Rhode Island	4.3	4.3	0	4	0	24.3	0	34.90	(100%)
South Dakota	2.5	0	32.6	0	0	n/a	0	33.10	(100%)
Idaho	14.9	10.9	0	0	0	0	0	24.53	(100%)
Mississippi	19.3	0	4	2.5	n/a	n/a	n/a	24.43	NM
Oklahoma	2.7	1.8	6.4	3	7.1	0	0	23.06	(100%)
New Hampshire	0	2	5.8	3.4	0	0	1.8	13.49	(3%)
New Mexico	7.8	0	0	0	0	0	0	6.80	(100%)
Alaska	0	0	6	n/a	0	n/a	0	6.00	(100%)
Delaware	0	0	0	5	0	0	0	4.00	(100%)
Montana	0	0	3.2	0	0	0	0	2.20	(100%)
North Dakota	0	1.4	0	0	1.5	0	0	0.90	(100%)
District of Columbia	0	0	n/a	0	0	0	0	0.00	NM
Hawaii	0	0	n/a	0	0	0	0	0.00	NM
Total	999.9	1,195.2	3,080.8	1,266.3	946.5	665.9	374.0	8,691.4	(69%)

Figure 2

CUMULATIVE VOLUME CAP (VC) AND PROGRAM USAGE: 2005 TO 2011 (\$ MILLIONS)					
	Total VC	For Housing	% Housing	For IRBs	% IRB
California	\$22,142	\$6,938	31.3%	\$354.6	1.6%
New Jersey	\$5,274	\$384	7.3%	\$257.9	4.9%
Nevada	\$1,829	\$119	6.5%	\$151.0	8.3%
Massachusetts	\$3,921	\$1,437	36.6%	\$355.6	9.1%
Hawaii	\$1,829	\$167	9.1%	\$0.1	0.0%
Florida	\$11,008	\$1,089	9.9%	\$247.6	2.2%
Rhode Island	\$1,829	\$191	10.4%	\$36.9	2.0%
Utah	\$1,829	\$89	4.9%	\$98.1	5.4%
Arizona	\$3,787	\$219	5.8%	\$125.6	3.3%
Illinois	\$6,940	\$1,097	15.8%	\$433.1	6.2%
Connecticut	\$2,128	\$163	7.6%	\$58.9	2.8%
New York	\$11,714	\$5,102	43.6%	\$194.1	1.7%
	\$74,228	\$16,993	22.9%	\$2,314	3.1%

Other Federal Economic Development Tools Available to Manufacturers

The IRB program is one of several federal programs available to assist manufacturers and other businesses in obtaining financing for their private facilities or activities. These alternative programs are administered by a variety of federal agencies and use different mechanisms (e.g. tax credits and second mortgage financing) in order to deliver assistance. Figure 3 below provides basic information for these various programs:

Figure 3

Program	Type of Subsidy	Agency	Description
SBA 504	Loan	Small Business Administration	Second position loans made for up to 40% of project costs through partner Certified Development Companies; banks participate at up to 50% allowing up to 90% financing
SBA 7A	Loan guarantee	Small Business Administration	Up to \$3.75 million guarantee on an up to \$5 million loan; 10% equity required
New Markets Tax Credits	Tax credit	Treasury	Tax credits allocated to projects through Community Development Entities can be sold to investors to raise equity for projects in qualifying census tracts
Community Development Block Grant	Loan or Grant	Housing and Urban Development	Discretionary program providing federal dollars to localities for revitalization - can be structured as loans or grants
Immigrant Investor Program - EB5	Loan	Private regional centers	Foreign investors fund projects that create jobs. For every job created, \$1 million (or \$500,000 in targetted areas) must be raised.

Figure 3 does not include local financing and economic development programs, which may also include grants, loans, guarantees, and other forms of assistance targeted specifically towards the manufacturing sector.

Figures 4 and 5 compare activity of the federal programs in the above chart in order to estimate where industrial companies may be turning for financing assistance and which programs may be better structured for the needs of this sector. The first table compares total program usage over a 5-year period. In general the level of program usage across the board dropped between 2007 and 2009, but is picking up again for 2010 and 2011.

Figure 4

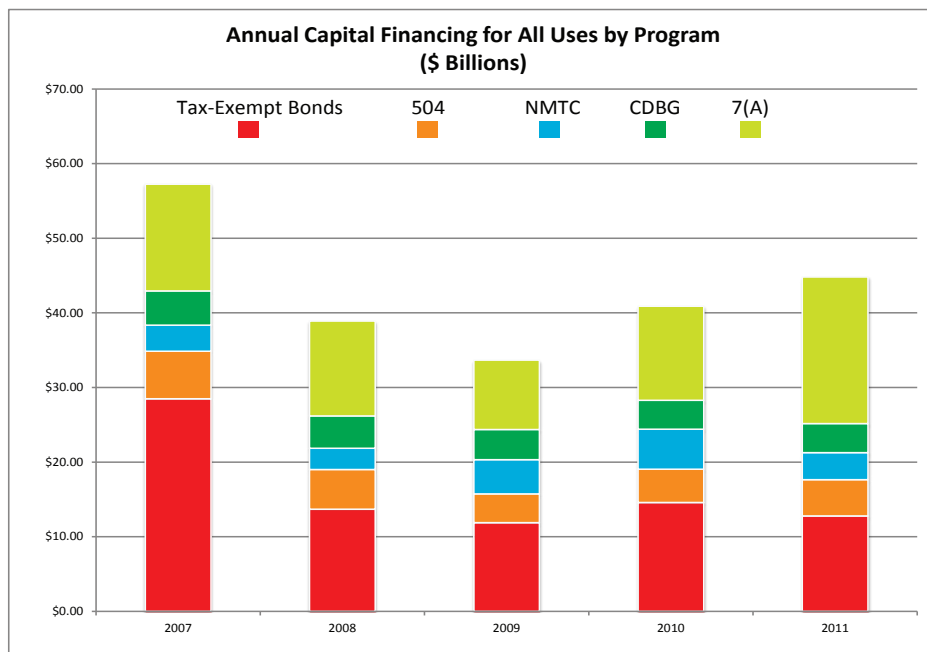
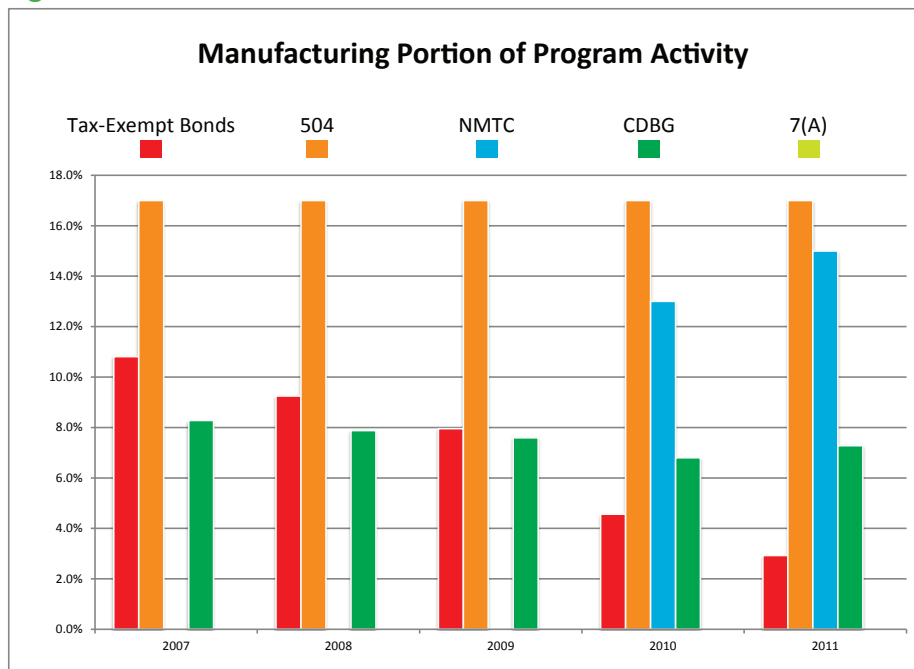


Figure 5 shows only dollar volumes for the manufacturing sector by program. In 2011, the tax-exempt bond program provided manufacturers with the lowest dollar volume activity of any of the federal programs in the comparison. It is also noteworthy that while dollar volumes in general are picking up for the programs compared, the amount of issuance for manufacturers within the bond program has continued to decline steadily since 2007.

Figure 5



This compares to the SBA504 program, where in a 2008 survey, 17% of all program users were found to be industrial in nature. Even with the New Markets Tax Credit Program, which more recently has emphasized direct use by operating entities, had a 13 and 15% usage by industrial companies in 2010 and 2011 respectively.

The tightening of the financial markets and the limited ability and desire of entities to borrow over the past several years has also had an impact on the IRB program usage. However, despite the effects of the economic environment, the program parameters themselves seem to be a very large impediment, even without larger economic factors, limiting the usage of the program and its ability to assist manufacturing entities as intended.

III. Urban Manufacturing Models and the IRB Program

The 2011 Pratt/Brookings report found that the growth in small urban manufacturers (SUMs) could be characterized by certain elements. The report states “...today’s manufacturing landscape is largely occupied by decentralized networks of small, specialized firms, many of which are hidden in plain sight in America’s urban areas.” These SUMs include food production, craft manufacturing, custom furniture and fixtures, display making and design oriented production, as well as specialized and just-in-time garment manufacturing. They are attracted to urban areas due to the size and proximity of the consumer markets, the access to high quality labor, as well as supportive local policies and transportation infrastructure. These SUMs have fared better than their larger counterparts with respect to job retention, and show promising signs of growing the production job base in the U.S. The report finds that these SUMs are less likely to release workers: “between 1972 and 1992, for example, as American manufacturers with over 500 employees laid-off 3 million workers, plants with fewer than 500 employees added 2 million jobs. In part due to the strength of urban manufacturing centers, current federal statistics show that manufacturing sector employment is growing for the first time in decades.

Local support systems have emerged that are fostering the growth of these small manufacturers across the country. In San Francisco, SFMade is working to support local production with marketing and outreach tools, retail assistance, and customer data information. In Cleveland, Ohio, WIRENET provides technical assistance and job training for to grow manufacturing firms. These local initiatives are providing opportunities, and often, innovative solutions to some of the challenges that the new small urban manufacturers are facing.

However, despite these successes and supportive local initiatives, SUMs face challenges specific to urban environments, including the high cost of real estate, that make financing and operating growth capital difficult. In New York City and San Francisco, industrial space can average from \$100 to \$200 / square foot for the purchase of high-end facilities, which is several times greater than real estate costs in suburban and rural markets. For example, in strong market cities an industrial developer could purchase only 50,000 square feet of space before hitting the project cap under the IRB program without accounting for other project related costs, such as renovations and machinery and equipment purchases that may require bond financing as well. Rental rates are also high, averaging from \$12 to \$15 per square foot annually in dense urban settings. These cost pressures have given rise

to real estate models that include shared spaces and not-for-profit or governmental sponsors/landlords developing rehabilitated facilities sometimes on public or subsidized land.

Urban Industrial Real Estate Development Models: Impediments to Utilization of IRBs

Multi-Tenant Facilities: There has been a fundamental change in the structure of manufacturing, and IRB program design has failed to keep pace. Large manufacturers exclusively occupying their own buildings have been replaced to a great degree by multi-tenanted buildings home to several smaller manufacturers, who while independent businesses, often work together on specific projects or otherwise develop competitive synergies. Recognizing this trend, developers – whether not-for-profit, affiliated with municipal government, or private for-profit entities – are creating multi-tenant facilities for rent to industrial/manufacturing tenants. But program regulations make it difficult for these developers and their tenants to utilize tax-exempt IRBs.

The Greenpoint Manufacturing and Design Center (GMDC), a 501(c)(3) developer of industrial shared space, has created six multi-tenanted manufacturing spaces, currently owning four of these buildings and net leasing and then renting out the remaining two buildings from other owners in Brooklyn, New York. In GMDC’s most recent project, it has purchased and will renovate a former auto repair facility constructed in the 1920s for use as a food production facility for multiple tenants. GMDC is seeking to meet the demand for mid-sized growing food producers in Brooklyn, who are finding their customer bases expanding in a market that lacks long-term industrial leases at affordable rents. GMDC has not been able to use the IRB program in the past to finance its facilities. Prior projects, as well as GMDC’s current food facility, would not qualify for the IRB program for several reasons. First, total project financing needs typically exceed \$10 million; second, GMDC’s capital expenditures combined with those of principal facility users (tenants using 10% or more of the facility) would likely exceed the \$20 million limit; in addition, the requirement in and of itself to investigate the capital expenditures of each of its tenants over the 6 year compliance period would have imposed an administrative burden out of proportion to the program’s benefits. Without this investigation, the tax counsel required to determine the legality of the issuance would not be able to issue a clean opinion. And lastly, the IRB program requires that 75% of the facility

be in a production use. GMDC allows its production tenants to dictate their own space requirements – between straight production and storage and other ancillary uses, which from time to time may fall below the 75% threshold. The cost and time associated with monitoring capital expenditure and space usage information dissuaded GMDC from using IRBs, even if their projects met the other program parameters. GMDC has instead turned to a mix of economic development capital including City grant funding, New Markets Tax Credit equity, as well as leveraging existing properties to borrow in the more traditional commercial banking channels for the remaining funds required to purchase and rehabilitate facilities. While GMDC was ultimately successful in this instance, the challenge of pulling such deals together slows the process, reduces their impact and deters other non-profits from pursuing such important development strategies.

Another successful illustration is the Brooklyn Navy Yard (BNY), a multi-tenant industrial park that is managed by the Brooklyn Navy Yard Development Corporation (BNYDC). BNYDC, a non-profit organization, operates the BNY, a 300-acre, city-owned industrial park, and provides affordable rents to manufacturing, design and other industrial tenants seeking long-term stability in the New York City market. BNYDC covers operating costs from the rents it charges on facilities it oversees and reinvests any surplus into the property for infrastructure needs and expansion. To cover costs of major capital infrastructure projects, BNY obtains direct funding from municipal appropriations, as well as economic development programming at various levels of government (including EB5 and NMTC). BNYDC has explored issuing tax-exempt bonds in both the governmental and private activity modes. BNYDC has also explored having its manufacturing tenants use the program for leasehold improvements. However, based on BNYDC's capital expenditures in excess of \$20 million as well as structural issues related to direct tenant financings (e.g. reluctance of investors to have leasehold mortgages act as collateral) financing capital improvements at the Brooklyn Navy Yard with the IRB program has proved to be infeasible.

In Detroit, the Russell Industrial Complex, providing over 2.2 million square feet of industrial and artistic space, is another example of a developer (this one for-profit) creating affordable space in smaller units for burgeoning industrial, craft and arts companies. Due to regulations requiring investigation of capital expenditures on principal users, financing improvements to the facility with the IRB program would not have been feasible.

Financing Mechanisms Taking Place of IRB Program

Lower transaction costs and more readily accessible local financing solutions are driving usage and relevance of the IRB program down. Several cities we spoke to during the course of researching this paper indicated they did not have an active IRB program due to the availability of more easily accessible and in some cases less costly financing programming that provides greater benefit to end users. For instance, Chicago offers a tax-increment financing tools which can provide manufacturing entities with grants for the creation of new facilities. Due to the popularity of this program, Chicago indicated that IRB had not been used for 10 years. Other states and local jurisdictions indicated declining program usage or lack of demand for IRBs in general. This is not surprising given the high issuance costs associated with a transaction. These costs include issuer fees, expense of bond counsel and company counsel, and any credit enhancement or other investor credit requirements. Even though some jurisdictions and borrowers have resorted to alternatives, these alternatives have their own limitations, such as shorter terms and personal guarantee requirements, so that a gap remains in the financing for industrial projects that the IRB program needs to be modified to fill.

Can the IRB Program Become Relevant to Urban Manufacturing?

With the current set of regulations, it is unlikely that the IRB program would be able to assist with the financing needs of SUMs, whether directly or through real estate developers. However, given the interest of both public and private sectors in supporting new manufacturing trends in urban areas, and the policy work of entities like Council of Development Finance Agencies, which recently completed a seminar series on how to support the reshoring trends, there seems to be an opportunity to make recommendations that could be heard at the federal level. Below is a list of recommendations that could be adopted by the Congress to create more opportunity for the tax-exempt bond financing structure to play a role in developing real estate for urban manufacturing business, particularly those housed in multi-tenanted buildings owned by non-profit development entities. The list is not exhaustive, but suggests that there are areas that need to be examined in the program, and that some regulations that have been on the books for decades, and are ripe for revision.

IV. Recommendations

A few of the suggestions below had at one point in time been allowed by the IRB program, but then program restrictions were put in place to reduce the program's influence on interest rates of municipal/governmental issuances in the bond markets and thus the program's impact on the federal budget and municipal debt service. Times have, however, changed: there is growing policy consensus on the need to strengthen the domestic manufacturing sector. That sector has restructured but not all economic programs have caught up with the new policy or economic reality. The IRB Program should be revised to:

- Increase the per-project project bond limits to \$20 million to allow larger transaction sizes, in particular those that occur in high priced real estate environments such as urban areas, to occur within the confines of the program.
- Increase the per-project capital expenditure limit to \$40 million and further increase the limit against local real estate indices that are above national averages, which would serve to even the playing field for manufacturers in high real estate markets;
- Allow tax-exempt bond proceeds to be coupled with the SBA 504 program so that projects requiring multiple sources of economic development funding, including tax-exempt bonds may be financed.
- Allow tax-exempt bond proceeds to be used to purchase shares in real estate cooperatives and for condos so that buyers of real estate structures more common in urban areas, such as commercial coops.

V. Conclusion

The concept of tax-exempt bonds for private entities historically has been a powerful economic development tool. Due to their ability to stimulate private investment, tax-exempt bonds have been used in targeted geographies suffering economy uncertainty (e.g. in New York City after the 9/11 Attacks and in post-Katrina New Orleans) as well as more systematically in geographies experiencing chronic underemployment and underinvestment (as in Federal Empowerment and Enterprise Zones). Thus, not surprisingly, over the years tax-exempt debt for manufacturing facilities has been a financing option supporting billions of dollars of private investment in the industrial sector.

However as manufacturing businesses in recent years have adapted to altered economic conditions and market demand, their physical and capital needs have changed in ways that have made them unlikely or unable to participate in the IRB program. New smaller urban manufacturing entities are more willing to share space and locate in the center of relatively higher-cost urban real estate markets, adjacent to retail and consumer markets.

These factors have resulted in IRB issuance and capital expenditure requirements disqualifying many a potential borrower. In addition, developers, both for and non-profit that are creating shared manufacturing spaces would also be disqualified from using IRBs in the financing of their facilities due to onerous aggregation requirements and strict definitions of what percentage a qualified facility must maintain in manufacturing uses.

Due to the potential of small urban manufacturers to play a role not only in the economic recovery but in a new sustainable reshored manufacturing model, it is the right time to evaluate the IRB program and its ability to play a role in supporting this growing sub-sector of industrial businesses. The IRB program will never be, nor should it be, a program that all manufacturers would be expected to access. Tax-exempt bonds by their nature will likely always be a more costly and complex financing alternative, best suited to larger scale projects with more established borrowers, compared to conventional debt and other federal programming such as SBA loans and guarantees.

Still, IRBs could be an important tool, particularly in the creation and rehabilitation of existing facilities for multi-tenant uses, and even the incubation of start-up manufacturing activities using shared manufacturing equipment or laboratory-like research space. Most of the fixes that are needed are cost-free, assuming that overall program volume caps are unchanged – there would just be fewer but larger transactions and simply require building more flexibility into the existing framework. Several of the recommendations, those related to increasing issuance and capital expenditure cap, are echoed in the legislative agenda of the Council of Development Finance Agencies. However the Urban Manufacturing Alliance goes further in suggesting that the IRB program can and should be amended to make IRBs work for 21st-century manufacturing – in particular projects that can support smaller urban enterprises. This policy goal is important if the resurgence of this sector, particularly in cities, is to be sustained.

BIBLIOGRAPHY

Forbes, "Cities Leading An American Manufacturing Revival." May 24, 2012. Online. Joel Kotkin Contributor.

A Historical Perspective of Small Issue Bonds, Lynn Kawecki, internet

Tax-Exempt Private Activity Bond, Compliance Guide from the Office of Tax Exempt Bonds, The Internal Revenue Service, Publication 4078 (Rev.9-2005), Catalog Number 34662G

CDDFA Publications – The Industry Primer: Development Bond Finance Reference Guide, 1998 (update June 2008), Council of Development Finance Agencies

Practitioner's Guide to Economic Development Finance, Building and Utilizing the Development Finance Toolbox, by Toby Rittner, Council of Development Finance Agencies. Lee Chilcote, Editor, 2009.

The Fundamentals of Municipal Bonds, Fifth Edition, The Bond Market Association, Judy Wesalo, Temel, John Wiley & Sons, Inc., New York. 2001.

Government Printing Office, which in turn collects data from The Economic Report of the President is an annual report written by the Chairman of the Council of Economic Advisers.

Josh Whitford and Jonathan Zeitlin, "Governing Decentralized Production: Institutions, Public Policy, and the Prospects for Inter-Firm Collaboration in U.S. Manufacturing," *Industry and Innovation* 11, (2004), citing Luria (2000). <http://www.whitehouse.gov/the-press-office/2012/07/17/fact-sheet-white-house-advanced-manufacturing-initiatives-drive-innovation>

<http://247wallst.com/2012/03/14/american-cities-where-manufacturing-is-booming/>

Metropolitan Policy Program at Brookings, Export Nation: How U.S. Metropolitan Areas Are Driving National Growth, Emilia Istrate and Nicholas Marchio, March 2012.

The Brookings Institution and the Pratt Center for Community Development, The Federal Role in Supporting Urban Manufacturing, Nisha Mistry and Joan Byron, April 2011.

About the Urban Manufacturing Alliance:

The Urban Manufacturing Alliance is a national collaborative of non-profit, for-profit and governmental stakeholders across major US cities, working together to grow manufacturing businesses, create living wage jobs and catalyze sustainable localized economies.

The UMA is generously supported by Citi Community Development and the Surdna Foundation.

Brief prepared for the Urban Manufacturing Alliance by the Pratt Center for Community Development. Kei Hayashi / BJH Advisors, principal author. For further information contact info@urbanmfg.org or Joan Byron, jbyron@prattcenter.net.