

## **DESTINATION-BASED TAXATION AND BORDER ADJUSTMENTS**

Scheduled for a Public Hearing  
Before the  
**HOUSE COMMITTEE ON WAYS AND MEANS**  
on May 23, 2017

Prepared by the Staff  
of the  
**JOINT COMMITTEE ON TAXATION**



May 22, 2017  
JCX-20-17

## CONTENTS

	<u>Page</u>
INTRODUCTION .....	1
I. PRESENT LAW AND BACKGROUND .....	2
A. General Overview of International Principles Applied to Taxation .....	2
1. Origin and destination principles .....	3
2. Source and residence principles.....	4
3. Resolving overlapping or conflicting jurisdiction to tax .....	5
B. International Principles as Applied in the U.S. System .....	7
1. Rules applicable to both inbound and outbound activities .....	7
2. Rules applicable to foreign activities of U.S. persons .....	10
3. Rules applicable to U.S. activities of foreign persons .....	14
II. DESTINATION-BASED TAXATION: ECONOMIC RATIONALE AND SELECTED PROPOSALS .....	18
A. Introduction.....	18
B. Economic Rationale for Destination-Based Taxation.....	19
1. Location of investment .....	19
2. Income shifting .....	19
3. Cross-border mergers and acquisitions.....	21
4. Efficiency and the source of tax revenue .....	22
C. Selected Destination-Based Tax Proposals for the United States.....	23
1. Growth and Investment Tax.....	23
2. Auerbach proposal .....	23
3. Blueprint .....	24
III. ECONOMIC ANALYSIS OF BORDER ADJUSTMENTS.....	26
A. Introduction.....	26
B. U.S. Cross-Border Transactions and Investments .....	27
1. National income accounting .....	27
2. Trends in the U.S. current account.....	30
3. Economic implications of trade deficits .....	33
C. Economic Effects of Border Adjustments .....	36
1. Introduction.....	36
2. Trade-neutrality result.....	36
3. Application of the trade-neutrality result to the Blueprint.....	39
4. Empirical studies on exchange rates and prices.....	45

## INTRODUCTION

The House Committee on Ways and Means has scheduled a public hearing on May 23, 2017, on border adjustments and international tax reform. This document,<sup>1</sup> prepared by the staff of the Joint Committee on Taxation, provides an overview and analysis of destination-based taxation and border adjustments.

While the origin and destination principles have been traditionally been considered principles of indirect tax (*e.g.*, sales and other consumption taxes), they may also be used to describe tax bases more generally. The tax base for a country with a pure origin-based tax consists of proceeds from the sale of goods and services produced in that country, regardless of where the sales occurred. In contrast, the tax base for a country with a pure destination-based tax consists of proceeds from the sale of goods and services to purchasers located in that country, regardless of where the goods and services were produced. The taxation of cross-border sales of goods and services under a destination-based tax is accomplished through border adjustments, whereby imports are taxed and exports are exempt from tax.

Part I of this document describes international principles that are applied to taxation and presents an overview of U.S. present law related to the taxation of cross-border income. The U.S. tax system is neither a pure origin-based tax nor a pure destination-based tax. However, it may be considered more origin-based in the sense that income from the sale of goods and services produced in the United States is generally part of the U.S. tax base, regardless of where the sales occur. It is not destination-based, as U.S. persons are subject to tax on their worldwide income, which may include income from the sale of goods and services neither produced nor purchased in the United States. As policymakers deliberate reforms to the U.S. system of taxing cross-border income, some have considered establishing a destination-based tax as a way of promoting certain economic policy goals and addressing problems arising from the more origin-based U.S. tax system. Part II describes the economic rationale for implementing a destination-based tax and summarizes some recent proposals that would move the United States toward a destination-based tax. Part III provides an economic analysis of the border adjustment mechanism of a destination-based tax.

---

<sup>1</sup> This document may be cited as follows: Joint Committee on Taxation, *Destination-Based Taxation and Border Adjustments* (JCX-20-17), May 22, 2017. This document can be found also on the Joint Committee on Taxation website at [www.jct.gov](http://www.jct.gov).

## I. PRESENT LAW AND BACKGROUND

### A. General Overview of International Principles Applied to Taxation

International law generally recognizes the right of each sovereign nation to prescribe rules to regulate conduct with a sufficient nexus to the sovereign nation. The nexus may be based on nationality of the actor, *i.e.*, a nexus between the said conduct and a person (whether natural or juridical) with a connection to the sovereign nation, or it may be territorial, *i.e.*, a nexus between the conduct to be regulated and the territory where the conduct occurs.<sup>2</sup> For example, most legal systems respect limits on the extent to which its measures may be given extraterritorial effect. The broad acceptance of such norms extends to authority to regulate cross-border trade and economic dealings, including taxation.

The bases for exercise of sovereign jurisdiction, *i.e.*, nationality of the person whose conduct is regulated and territory, have been refined and, in varying combinations, adapted to form the principles for determining whether sufficient nexus with a jurisdiction exists to conclude that the jurisdiction may enforce its right to impose a tax. The elements of nexus and the nomenclature of the principles may differ based on the type of tax in question. Taxes are categorized as either direct taxes or indirect taxes. The former category of tax generally refers to those taxes that are imposed directly on a person (“capitation tax”), property, or income from property and that cannot be shifted to another person by the taxpayer. In contrast, indirect taxes generally refers to taxes on consumption or production of goods or services, for which a taxpayer may shift responsibility to another person. Such taxes include sales or use taxes, value-added taxes, or customs duties.<sup>3</sup>

Although governments have imposed direct taxes on property and indirect taxes and duties on specific transactions since ancient times, the history of direct taxes in the form of an income tax is relatively recent.<sup>4</sup> When determining how to allocate the right to tax a particular item of income, most jurisdictions consider principles based on either the source (territory or

---

<sup>2</sup> American Law Institute, *Restatement (Third) of Foreign Relations Law of the United States*, secs. 402 and 403, (1987).

<sup>3</sup> Maria S. Cox, Fritz Neumark, et al., “Taxation” *Encyclopedia Britannica*, <https://www.britannica.com/topic/taxation/Classes-of-taxes>, accessed May 16, 2017. Whether a tax is considered a direct tax or indirect tax has varied over time, and no single definition is used. For a review of the significance of these terms in Federal tax history, see Alan O. Dixler, “Direct Taxes Under the Constitution: A Review of the Precedents,” *Tax History Project, Tax Analysts*, available at <http://www.taxhistory.org/thp/readings.nsf/ArtWeb/2B34C7FBDA41D9DA8525730800067017?OpenDocument> accessed May 17, 2017.

<sup>4</sup> The earliest western income tax system is traceable to the British Tax Act of 1798, enacted in 1799 to raise funds needed to prosecute the Napoleonic wars, and rescinded in 1816. See, A.M. Bardopoulos, *eCommerce and the Effects of Technology on Taxation*, Law, Governance and Technology Series 22, DOI 10.1007/978-3-319-15449-7\_2, (Springer 2015), at Section 2.2. “History of Tax,” pp. 23-24. See also, <http://www.parliament.uk/about/living-heritage/transformingsociety/private-lives/taxation/overview/incometax>.

situs of the income) or residence (nationality of the taxpayer).<sup>5</sup> By contrast, when the authority to collect indirect taxes in the form of sales taxes or value added taxes is under consideration, jurisdictions analyze the taxing rights in terms of the origin principle or destination principle. The balance of this Part I.A describes the principles in more detail and how jurisdictions resolve claims of overlapping jurisdiction.

## 1. Origin and destination principles

With respect to cross-border transactions, the Organization for Economic Co-operation and Development (“OECD”) has recommended that the destination principle be adopted for all indirect taxes, in part to conform to the treatment of such transactions for purposes of customs duties. The OECD defines the destination principle as “the principle whereby, for consumption tax purposes, internationally traded services and intangibles should be taxed according to the rules of the jurisdiction of consumption.”<sup>6</sup> A jurisdiction may determine the place of use or consumption by adopting the convention that the place of business or residence of a customer is the place of consumption. Use of such proxies are needed to determine the location of businesses that are juridical entities, which are more able than natural persons to move the location of “use” of goods, services or intangibles in response to imposition of tax.<sup>7</sup>

Indirect taxes that are imposed based on the place where production of goods or services occur, irrespective of the location of the persons who own the means of production, and where the goods and services go after being produced, are examples of origin-based taxation. If, instead, authority to tax a transaction or service is dependent on the location of use or consumption of the goods or services, the tax system is an example of a destination-based tax. The most common form of a destination-based tax is the destination-based value-added tax (“VAT”). Over 160 countries have adopted a VAT,<sup>8</sup> which is generally a tax imposed and collected on the “value added” at every stage in the production and distribution of a good or service. Although there are several ways to compute the taxable base for a VAT, the amount of value added can generally be thought of as the difference between the value of sales (outputs) and purchases (inputs) of a business.<sup>9</sup> The United States does not have a VAT, nor is there a

---

<sup>5</sup> Reuven Avi-Yonah, “International Tax as International Law,” 57 *Tax Law Review* 483 (2003-2004).

<sup>6</sup> See, OECD, “Recommendation of the Council on the application of value added tax/goods and services tax to the international trade in services and intangibles as approved on September 27, 2016,” [C(2016)120], appendix, page 3, reproduced in the appendix, OECD, *International VAT/GST Guidelines*, (2017) the OECD Publishing, Paris.

<sup>7</sup> For discussion of the advantages and disadvantages of these principles, see Part II, below.

<sup>8</sup> Alan Schenk, Victor Thuronyi, and Wei Cui, *Value Added Tax: A Comparative Approach*, Cambridge University Press, 2015. Consistent with the OECD *International VAT/GST Guidelines*, *supra*, the term VAT is used to refer to all broad-based final consumption taxes, regardless of the acronym used to identify. Thus, many countries that denominate their national consumption tax as a GST (general sales tax) are included in the estimate of the number of countries with a VAT.

<sup>9</sup> Nearly all countries use the credit-invoice method of calculating value added to determine VAT liability. Under the credit-invoice method, a tax is imposed on the seller for all of its sales. The tax is calculated by applying the tax rate to the sales price of the good or service, and the amount of tax is generally disclosed on the sales invoice.

Federal sales or use tax. However, the majority of the States have enacted sales or use taxes, including both origin-based taxes and destination-based taxes.<sup>10</sup>

## 2. Source and residence principles

Exercise of taxing authority based on a person's residence may be based on status as a national, resident, or domiciliary of a jurisdiction and may reach worldwide activities of such persons. As such, it is the broadest assertion of taxing authority. For individuals, the test of resident status may depend solely upon nationality, or a physical presence test, or some combination. For all other persons, determining residency may require more complex consideration of the level of activities within a jurisdiction, management, control or place of incorporation. Such rules generally reflect a policy decision about the requisite level of activity or contact by a person that is sufficient to warrant assertion of taxing jurisdiction.

Source-based exercise of taxing authority is imposed only to the extent that activities occur, or property is located, in the territory of the taxing jurisdiction. If a person conducts business or owns property in a jurisdiction, or if a transaction occurs in whole or in part in a jurisdiction, the resulting limited basis of taxation is a territorial application. Most jurisdictions, including the United States, have rules for determining the source of items of income and expense in a broad range of categories such as compensation for services, dividends, interest, royalties and gains.

Regardless of which of these two bases of taxing authority is chosen by a jurisdiction, the determination of whether a transaction, activity or person is subject to its tax regime requires that the jurisdiction establish internal rules for determining the limits of its assertion of authority to tax.

---

A business credit is provided for all VAT levied on purchases of taxable goods and services (*i.e.*, “inputs”) used in the seller’s business. The ultimate consumer (*i.e.*, a non-business purchaser), however, does not receive a credit with respect to his or her purchases. The VAT credit for inputs prevents the imposition of multiple layers of tax with respect to the total final purchase price (*i.e.*, a “cascading” of the VAT). As a result, the net tax paid at a particular stage of production or distribution is based on the value added by that taxpayer at that stage of production or distribution. In theory, the total amount of tax paid with respect to a good or service from all levels of production and distribution should equal the sales price of the good or service to the ultimate consumer multiplied by the VAT rate.

In order to receive an input credit with respect to any purchase, a business purchaser is generally required to possess an invoice from a seller that contains the name of the purchaser and indicates the amount of tax collected by the seller on the sale of the input to the purchaser. At the end of a reporting period, a taxpayer may calculate its tax liability by subtracting the cumulative amount of tax stated on its purchase invoices from the cumulative amount of tax stated on its sales invoices.

<sup>10</sup> EY, *Worldwide VAT, GST and Sales Tax Guide 2015*, p. 1021, available at [http://www.ey.com/Publication/vwLUAssets/Worldwide-VAT-GST-and-sales-tax-guide-2015/\\$FILE/Worldwide%20VAT,%20GST%20and%20Sales%20Tax%20Guide%202015.pdf](http://www.ey.com/Publication/vwLUAssets/Worldwide-VAT-GST-and-sales-tax-guide-2015/$FILE/Worldwide%20VAT,%20GST%20and%20Sales%20Tax%20Guide%202015.pdf).

### **3. Resolving overlapping or conflicting jurisdiction to tax**

Countries have developed norms about what constitutes a reasonable regulatory action by a sovereign state that will be respected by other sovereign states. Consensus on what constitutes a reasonable limit on the extent of one state’s jurisdiction helps to minimize the risk of conflicts arising as a result of extraterritorial action by a state or overlapping exercise of authority by states. Mechanisms to eliminate double taxation have developed to address those situations in which the source and residency determinations of the respective jurisdictions result in duplicative assertion of taxing authority. For example, asymmetry between different standards adopted in two countries for determining residency of persons, source of income, or other basis for taxation may result in income that is subject to taxation in both jurisdictions.

When the rules of two or more countries overlap, potential double taxation is usually mitigated by operation of bilateral tax treaties or by legislative measures permitting credit for taxes paid to another jurisdiction. The United States is a partner in numerous bilateral agreements that have as their objective the avoidance of international double taxation and the prevention of tax avoidance and evasion. Another related objective of U.S. tax treaties is the removal of the barriers to trade, capital flows, and commercial travel that may be caused by overlapping tax jurisdictions and by the burdens of complying with the tax laws of a jurisdiction when a person’s contacts with, and income derived from, that jurisdiction are minimal. The U.S. Model treaty, published in February 2016 with an accompanying Preamble by the Department of Treasury, reflects the most recent comprehensive statement of U.S. negotiating position with respect to tax treaties.<sup>11</sup> Bilateral agreements are also used to permit limited mutual administrative assistance between jurisdictions.<sup>12</sup>

In addition to entering into bilateral treaties, countries have worked in multilateral organizations to develop common principles to alleviate double taxation. Those principles are generally reflected in the provisions of the Model Tax Convention on Income and on Capital of the Organization for Economic Cooperation and Development (the “OECD Model treaty”),<sup>13</sup> a

---

<sup>11</sup> The U.S. Model treaty is updated periodically to reflect developments in the negotiating position of the United States. Such changes include provisions that were successfully included in bilateral treaties concluded by the United States, as well as new proposed measures not yet included in a bilateral agreement. The current U.S. Model treaty is available at <https://www.treasury.gov/resource-center/tax-policy/treaties/Documents/Treaty-US%20Model-2016.pdf>; the Preamble is available at <https://www.treasury.gov/resource-center/tax-policy/treaties/Documents/Preamble-US%20Model-2016.pdf>.

<sup>12</sup> Although U.S. courts extend comity to foreign judgments in some instances, they are not required to recognize or assist in enforcement of foreign judgments for collection of taxes, consistent with the common law “revenue rule” in *Holman v. Johnson*, 1 Cowp. 341, 98 Eng. Rep. 1120 (K.B.1775). American Law Institute, *Restatement (Third) of Foreign Relations Law of the United States*, sec. 483, (1987). The rule retains vitality in U.S. case law. *Pasquantino v. United States*, 544 U.S. 349; 125 S. Ct. 1766; 161 L. Ed. 2d 619 (2005) (a conviction for criminal wire fraud arising from an intent to defraud Canadian tax authorities was found not to conflict “with any well-established revenue rule principle[,]” and thus was not in derogation of the revenue rule). To the extent it is abrogated, it is done so in bilateral treaties, to ensure reciprocity. At present, the United States has such agreements in force with five jurisdictions: Canada; Denmark; France; Netherlands; and Sweden.

<sup>13</sup> OECD (2014), Model Tax Convention on Income and on Capital: Condensed Version 2014, OECD Publishing. [http://dx.doi.org/10.1787/mtc\\_cond-2014-en](http://dx.doi.org/10.1787/mtc_cond-2014-en). The multinational organization was first established in

precursor of which was first developed by a predecessor organization in 1958, which in turn has antecedents from work by the League of Nations in the 1920s.<sup>14</sup> As a consensus document, the OECD Model treaty is intended to serve as a model for countries to use in negotiating a bilateral treaty that would settle issues of double taxation as well as to avoid inappropriate double nontaxation. The provisions have developed over time as practice with actual bilateral treaties leads to unexpected results and new issues are raised by parties to the treaties.<sup>15</sup>

---

1961 by the United States, Canada and 18 European countries, dedicated to global development, and has since expanded to 34 members.

<sup>14</sup> “Report by the Experts on Double Taxation,” League of Nation Document E.F.S. 73|F19 (1923), a report commissioned by the League at its second assembly. See also, Lara Friedlander and Scott Wilkie, “Policy Forum: The History of Tax Treaty Provisions--And Why It Is Important to Know About It,” 54 *Canadian Tax Journal* No. 4 (2006).

<sup>15</sup> For example, the OECD initiated a multi-year study on base-erosion and profit shifting in response to concerns of multiple members. For an overview of that project, see Joint Committee on Taxation, *Background, Summary, and Implications of the OECD/G20 Base Erosion and Profit Shifting Project* (JCX-139-15), November 30, 2015. This document can also be found on the Joint Committee on Taxation website at [www.jct.gov](http://www.jct.gov).

## **B. International Principles as Applied in the U.S. System**

The United States has adopted a Code that combines residence-based taxation of all U.S. persons on all income, whether derived in the United States or abroad, with source-based taxation of income of nonresident aliens and foreign entities. Under this system (sometimes described as the U.S. hybrid system), the application of the Code differs depending on whether income arises from outbound investment or inbound investment. Outbound investment refers to the foreign activities of U.S. persons, while inbound investment is investment by foreign persons in U.S. assets or activities, although certain rules are common to both inbound and outbound activities.

### **1. Rules applicable to both inbound and outbound activities**

Although the U.S. tax rules differ depending on whether the activity in question is inbound or outbound, certain concepts apply to both inbound and outbound investment. Such areas include the classification and residence of persons, the rules for determination of source, intercompany pricing, rules intended to prevent reduction of the U.S. tax base and foreign tax credits.

#### Residence

U.S. persons are subject to tax on their worldwide income. The Code defines U.S. person to include all U.S. citizens and residents as well as domestic entities such as partnerships, corporations, estates and certain trusts.<sup>16</sup> The term “resident” is defined only with respect to natural persons. Noncitizens who are lawfully admitted as permanent residents of the United States in accordance with immigration laws (colloquially referred to as green card holders) are treated as residents for tax purposes. In addition, noncitizens who meet a substantial presence test and are not otherwise exempt from U.S. taxation, are also taxable as U.S. residents.<sup>17</sup>

For legal entities, the Code determines whether an entity is subject to U.S. taxation on its worldwide income on the basis of its place of organization. For purposes of U.S. tax law, a corporation or partnership is treated as domestic if it is organized or created under the laws of the United States or of any State, unless, in the case of a partnership, the Secretary prescribes otherwise by regulation.<sup>18</sup> All other partnerships and corporations (that is, those organized under the laws of foreign countries) are treated as foreign.<sup>19</sup> In contrast, place of organization is not

---

<sup>16</sup> Sec. 7701(a)(30).

<sup>17</sup> Sec. 7701(b).

<sup>18</sup> Sec. 7701(a)(4).

<sup>19</sup> Secs. 7701(a)(5) and 7701(a)(9). Entities organized in a possession or territory of the United States are not considered to have been organized under the laws of the United States.

determinative under other taxing jurisdictions, and other factors such as situs, management and control are used to determine residence. As a result, legal entities may have dual residence.<sup>20</sup>

If a payor or recipient is an entity that is eligible to elect its classification for Federal tax purposes,<sup>21</sup> its choice of whether to be recognized as legally separate from its owner in another jurisdiction may affect the determination of the source of the income and other tax attributes, if as a result of the election, the entity is a hybrid entity that is disregarded in one jurisdiction, but recognized in the other.

### Foreign tax credits

To mitigate double taxation of foreign-source income, the United States allows a credit for foreign income taxes.<sup>22</sup> The foreign tax credit generally is available to offset, in whole or in part, the U.S. tax owed on foreign-source income, whether the income is earned directly by the domestic corporation, repatriated as an actual dividend, or included in the domestic parent corporation's income under one of the anti-deferral regimes.<sup>23</sup> The amount of the credit is limited to the U.S. tax in the same proportion that foreign source taxable income bears to the taxpayer's worldwide taxable income. As a consequence, even though resident individuals and domestic corporations are subject to U.S. tax on all their income, both U.S. and foreign source, the source of income remains a critical factor to the extent that it determines the limitation on the amount of credit available for foreign taxes paid. This limitation is computed by reference to the corporation's U.S. tax liability on its taxable foreign-source income in each of two principal limitation categories, commonly referred to as the "general basket" and the "passive basket." Consequently, the expense allocation rules primarily affect taxpayers that may not be able to fully use their foreign tax credits because of the foreign tax credit limitation. In addition to the statutory relief afforded by the credit, the network of bilateral treaties to which the United States is a party provides a system for elimination of double taxation and ensuring reciprocal treatment of taxpayers from treaty countries.

Present law also provides detailed rules for the allocation of deductible expenses between U.S.-source income and foreign-source income. These rules do not, however, affect the timing of the expense deduction. A domestic corporation generally is allowed a current deduction for its expenses (such as interest and administrative expenses) that support income that is derived through foreign subsidiaries and on which U.S. tax is deferred. The expense allocation rules

---

<sup>20</sup> "The notion of corporate residence is an important touchstone of taxation, however, in many foreign income tax systems[,] with the result that the bilateral treaties are often relied upon to resolve conflicting claims of taxing jurisdiction. Joseph Isenbergh, Vol. 1 *U.S. Taxation of Foreign Persons and Foreign Income*, Para. 7.1 (Fourth Ed. 2016).

<sup>21</sup> Treas. Reg. sec. 301.7701-1, *et seq.*

<sup>22</sup> In lieu of the foreign tax credit, foreign income, war profits, and excess profits taxes are allowed as deductions under section 164(a)(3).

<sup>23</sup> Secs. 901, 902, 960, and 1291(g).

apply to a domestic corporation principally for determining the corporation's foreign tax credit limitation.

#### Rules for determining source of income and expenses

Category-by-category rules determine whether income has a U.S. source or a foreign source. For example, compensation for personal services generally is sourced based on where the services are performed, dividends and interest are, with limited exceptions, sourced based on the residence of the taxpayer making the payments, and royalties for the use of property generally are sourced based on where the property is used.

The Code specifies rules for determining the source of income derived from the following items: interest; dividends; royalties; rents; personal property; personal services; amounts received with respect to guarantees of indebtedness; and insurance.<sup>24</sup> Special rules are provided for income from international transportation, communications and space and ocean activities.<sup>25</sup> To determine whether items are derived from United States sources, various factors are relevant, including the status or nationality of the payor, the status or nationality of the recipient, the location of the recipient's activities that generate the income, and the location of any assets that generate the income.

To the extent that the source of income is not specified by statute, the Treasury Secretary may promulgate regulations that explain the appropriate treatment.<sup>26</sup> However, many items of income are not explicitly addressed by either the Code or Treasury regulations, sometimes resulting in non-taxation of the income. On several occasions, courts have determined the source of such items by applying the rule for the type of income to which the disputed income is most closely analogous, based on all facts and circumstances.<sup>27</sup>

#### Anti-base erosion measures

U.S. tax law includes several statutory rules intended to prevent reduction of the U.S. tax base. Such rules limit the earnings stripping potential of excessive borrowing in the United States by denying deductions of interest in certain circumstances.<sup>28</sup> Tax benefits otherwise available to a domestic corporation that migrates its tax home from the United States to foreign jurisdiction are denied to such inverted corporation, which continues to be treated as a domestic

---

<sup>24</sup> Secs. 861-863.

<sup>25</sup> Sec. 864.

<sup>26</sup> Sec. 7805 (general authority to prescribe rules and regulations needed to enforce the Code, subject to restrictions on retroactive rule-making); *Home Concrete & Supply, LLC. v. United States*, 132 S. Ct. 1836; 182 L. Ed. 2d 746 (2012).

<sup>27</sup> See, e.g., *Hunt v. Commissioner*, 90 T.C. 1289 (1988).

<sup>28</sup> Sec. 163(j).

corporation.<sup>29</sup> Outbound transfers of intangible property may trigger recognition of any unrecognized appreciation<sup>30</sup> or result in reallocation of income to ensure that intercompany pricing with respect to the transfer is commensurate with the income attributable to the intangible.<sup>31</sup>

## 2. Rules applicable to foreign activities of U.S. persons

Income earned directly by a U.S. person from the conduct of a foreign business is generally taxed on a current basis,<sup>32</sup> but income earned indirectly from a separate legal entity operating the foreign business is not. Instead, active foreign business income earned by a U.S. person indirectly through an interest in a foreign corporation generally is not subject to U.S. tax until the income is distributed as a dividend to the domestic corporation. Certain anti-deferral regimes may cause the U.S. owner to be taxed on a current basis in the United States on certain categories of passive or highly mobile income earned by the foreign corporation, regardless of whether the income has been distributed as a dividend to the domestic parent corporation. The main anti-deferral regimes that provide such exceptions are the controlled foreign corporation (“CFC”) rules of subpart F<sup>33</sup> and the passive foreign investment company (“PFIC”) rules.<sup>34</sup>

### Subpart F regime

The anti-deferral regime known as subpart F departs from the general rules by requiring that certain shareholders’ proportionate shares of the earnings of CFCs be subject to U.S. income tax on a current basis, even if the earnings are not distributed to the shareholders. A CFC is generally a foreign corporation in which more than 50 percent of the corporation’s stock (measured by vote or value) is owned by U.S. persons (directly, indirectly, or constructively) who own at least 10 percent of the stock (measured by vote only).<sup>35</sup> Only a U.S. person who owns at least 10 percent of the stock of a foreign corporation is a United States shareholder within the meaning of subpart F. A United States shareholder is subject to current U.S. taxation on its pro rata share of certain earnings and profits (“E&P”) of the CFC that constitute either subpart F income or includible investments in U.S. property.<sup>36</sup> Where the foreign country in

---

<sup>29</sup> Sec. 7874.

<sup>30</sup> Sec. 367(d).

<sup>31</sup> Sec. 482 and Treas. Reg. sec. 1.482-4, 1.482-7.

<sup>32</sup> A U.S. citizen or resident living abroad may be eligible to exclude from U.S. taxable income certain foreign earned income and foreign housing costs under section 911. For a description of this exclusion, see *Present Law and Issues in U.S. Taxation of Cross-Border Income* (JCX-42-11), September 6, 2011, p. 52.

<sup>33</sup> Secs. 951-964.

<sup>34</sup> Secs. 1291-1298.

<sup>35</sup> Secs. 951(b), 957, and 958.

<sup>36</sup> Sec. 951(a).

which the CFC is tax-resident for foreign tax purposes imposes an income tax on the income of the CFC, a foreign tax credit generally is available to offset, in whole or in part, the U.S. tax owed on foreign-source income,<sup>37</sup> in which case the net U.S. tax owed is, in broad terms, the difference between the U.S. tax otherwise applicable to the income and the foreign tax imposed on the income.

Subpart F income generally includes passive income and other income that is readily movable from one taxing jurisdiction to another and consists of foreign base company income,<sup>38</sup> insurance income,<sup>39</sup> and certain income relating to international boycotts and other violations of public policy.<sup>40</sup> Several exceptions to the broad definition of subpart F income permit continued deferral for certain transactions, dividends, interest and certain rents and royalties received by a CFC from a related corporation organized and operating in the same foreign country in which the CFC is organized.<sup>41</sup> The same-country exception is not available to the extent that the payments reduce the subpart F income of the payor. A second exception from foreign base company income and insurance income is available for any item of income received by a CFC if the taxpayer establishes that the income was subject to an effective foreign income tax rate greater than 90 percent of the maximum U.S. corporate income tax rate (that is, more than 90 percent of 35 percent, or 31.5 percent).<sup>42</sup> A third exception, the provision colloquially referred to as the “CFC look-through” rule, excludes from foreign personal holding company income dividends, interest, rents, and royalties received or accrued by one CFC from a related CFC (with relation based on control) to the extent attributable or properly allocable to non-subpart-F income of the payor.<sup>43</sup> The application of the look-through rule applies to taxable years of foreign corporations beginning before January 1, 2020, and to taxable years of U.S. shareholders with or within which such taxable years of foreign corporations end.<sup>44</sup>

---

<sup>37</sup> Secs. 901, 902, and 960.

<sup>38</sup> Sec. 954. Foreign base company income consists of foreign personal holding company income, which includes passive income such as dividends, interest, rents, and royalties, and a number of categories of income from business operations, including foreign base company sales income, foreign base company services income, and foreign base company oil-related income.

<sup>39</sup> Sec. 953.

<sup>40</sup> Sec. 952(a)(3)-(5).

<sup>41</sup> Sec. 954(c)(3).

<sup>42</sup> Sec. 954(b)(4).

<sup>43</sup> Sec. 954(c)(6).

<sup>44</sup> See section 144 of the Protecting Americans from Tax Hikes Act of 2015 (Division Q of Pub. L. No. 114-113), H.R. 2029 (114<sup>th</sup> Cong.) [“the PATH Act of 2015”], which extended section 954(c)(6) for five years. The House agreed to amendments to the Senate amendment on December 17, and December 18, 2015, and the bill, as amended, passed the House on December 18, 2015. The Senate agreed to the House amendments on December 18, 2015. The President signed the bill on December 18, 2015. Congress has previously extended the application of

In addition to the above exceptions, there are also exceptions from subpart F income for certain income of a CFC that is derived in the active conduct of a banking or financing business (“active financing income”), and for certain income of a qualifying insurance company. Those exceptions apply to all taxable years of the foreign corporation and for taxable years of the shareholders that end during or within such taxable years of the corporation.<sup>45</sup> Often referred to as the active finance exception, the exception applies to income derived in the active conduct of a banking, financing, or insurance business<sup>46</sup> and requires, among other things, that the CFC be predominantly engaged in such business and conduct substantial activity with respect to such business.

#### Other inclusions under subpart F: investments in U.S. property

To stop taxpayers from avoiding U.S. tax by repatriating untaxed CFC earnings through non-dividend payments such as loans to the U.S. parent company, subpart F also requires that United States shareholders of a CFC include in income their pro rata shares of a CFC’s untaxed earnings invested in certain items of U.S. property.<sup>47</sup> This U.S. property generally includes tangible property located in the United States, stock of a U.S. corporation, an obligation of a U.S. person, and certain intangible assets, such as patents and copyrights, acquired or developed by the CFC for use in the United States.<sup>48</sup> Exceptions to the definition of U.S. property, include U.S. bank deposits, certain export property, and certain trade or business obligations.<sup>49</sup>

#### Adjustment of tax attributes to reflect subpart F inclusions

Subpart F includes rules for the computation of E & P and for basis adjustments to avoid taxing earnings that have been previously taxed under subpart F. Ordering rules provide that distributions from a CFC are treated as coming first out of E & P of the CFC that have been previously taxed under section 956 as investments in U.S. property, then from earnings that have been previously taxed under subpart F, and then out of other E & P.<sup>50</sup> Other rules ensure that previously taxed E & P are not taxed again when actually distributed to a United States shareholder of a CFC, whether the previous exclusion was based on subpart F income or as a

---

section 954(c)(6) several times, most recently in the Tax Increase Prevention Act of 2014, Pub. L. No. 113-295; Pub. L. No. 107-147, sec. 614, 2002; Pub. L. No. 106-170, sec. 503, 1999; Pub. L. No. 105-277, 1998.

<sup>45</sup> Secs. 953 and 954(h). Section 128 of the PATH Act of 2015 made the temporary active financing and insurance exceptions permanent, after multiple extensions. American Taxpayer Relief Act of 2012, Pub. L. No. 112-240, sec. 322(b); Pub. L. No. 111-312, sec. 750(a), 2010; Pub. L. No. 110-343, div. C, sec. 303(b), 2008; Pub. L. No. 109-222, sec. 103(a)(2), 2006; Pub. L. No. 107-147, sec. 614, 2002; Pub. L. No. 106-170, sec. 503, 1999.

<sup>46</sup> Sec. 954(h), (i).

<sup>47</sup> Secs. 951(a)(1)(B) and 956.

<sup>48</sup> Sec. 956(c)(1).

<sup>49</sup> Sec. 956(c)(2).

<sup>50</sup> Sec. 959(c).

result of increased investments in U.S. property.<sup>51</sup> A United States shareholder's basis in the stock of a CFC is increased by the amount of the shareholder's subpart F inclusions in respect of the CFC stock and is decreased by the amount of any distributions received from the CFC that are excluded from the shareholder's income as previously taxed income.<sup>52</sup>

#### Financial reporting requirements applicable to CFC earnings

Under Generally Accepted Accounting Principles ("GAAP") principles, the earnings of a foreign subsidiary are generally required to be included in the consolidated financial statements of the U.S. parent during the period in which they are earned, even though tax is deferred for earnings that are not distributed to the U.S. parent or otherwise includable, such as under subpart F. These undistributed earnings of a foreign subsidiary that are included in financial statement consolidated income but which are deferred from U.S. taxation represent a temporary difference for which a tax liability and associated tax expense is currently accrued, unless the relevant tax laws provide a means by which the investment in the subsidiary can be recovered tax-free.<sup>53</sup> It is generally presumed for U.S. GAAP purposes that all undistributed earnings of a foreign subsidiary will be repatriated to the U.S. parent entity. A firm may overcome that presumption by satisfying the "indefinite reversal criteria."<sup>54</sup> When a parent entity makes an assertion regarding its intent to indefinitely reinvest foreign earnings, and has demonstrated its ability to do so, it is required to disclose the gross amount of foreign earnings in the footnotes of its financial statements. The parent entity is also required to disclose the nature of events that would give rise to taxation of the earnings in the parent jurisdiction, as well as to provide either an estimate of the tax liability associated with the foreign earnings or a statement that it is impractical to provide a reasonable estimate of the tax liability.

#### Passive foreign investment companies

The Tax Reform Act of 1986<sup>55</sup> established the PFIC anti-deferral regime. A PFIC is generally defined as any foreign corporation if 75 percent or more of its gross income for the taxable year consists of passive income, or 50 percent or more of its assets consists of assets that produce, or are held for the production of, passive income.<sup>56</sup> Alternative sets of income

---

<sup>51</sup> Sec. 959(a)(2).

<sup>52</sup> Secs. 961(a) and 961(b).

<sup>53</sup> Accounting Standards Codification ("ASC") 740-30-25-3, *Income Taxes, Other Considerations or Special Areas, Recognition of Undistributed Earnings of Subsidiaries and Corporate Joint Ventures*.

<sup>54</sup> ASC 740-30-25-17, *Income Taxes, Other Considerations or Special Areas, Recognition, Exceptions to Comprehensive Recognition of Deferred Income Taxes*. These criteria require that the company provide evidence of specific plans for reinvestment of the undistributed earnings that demonstrate that remittance of the earnings will be postponed indefinitely and demonstrate that the U.S. parent company has adequate cash flows from other sources and will not require remittances from the foreign subsidiary.

<sup>55</sup> Pub. L. No. 99-514.

<sup>56</sup> Sec. 1297.

inclusion rules apply to U.S. persons that are shareholders in a PFIC, regardless of their percentage ownership in the company. One set of rules applies to PFICs that are qualified electing funds, under which electing U.S. shareholders currently include in gross income their respective shares of the company's earnings, with a separate election to defer payment of tax, subject to an interest charge, on income not currently received.<sup>57</sup> A second set of rules applies to PFICs that are not qualified electing funds, under which U.S. shareholders pay tax on certain income or gain realized through the company, plus an interest charge that is attributable to the value of deferral.<sup>58</sup> A third set of rules applies to PFIC stock that is marketable, under which electing U.S. shareholders currently take into account as income (or loss) the difference between the fair market value of the stock as of the close of the taxable year and their adjusted basis in such stock (subject to certain limitations), often referred to as "marking to market."<sup>59</sup>

### **3. Rules applicable to U.S. activities of foreign persons**

Nonresident aliens and foreign corporations are generally subject to U.S. tax only on their U.S.-source income. The U.S. tax rules for U.S. activities of foreign taxpayers apply differently to two broad types of income: U.S.-source income that is "fixed or determinable annual or periodical gains, profits, and income" ("FDAP income") or income that is "effectively connected with the conduct of a trade or business within the United States" ("ECI").

#### FDAP income

FDAP income generally is subject to a 30-percent rate of tax that is collected by withholding at the source of payment and is limited to income that is not effectively connected with the conduct of a U.S. trade or business.<sup>60</sup> The items enumerated in defining FDAP income are illustrative; the common characteristic of types of FDAP income is that taxes with respect to the income may be readily computed and collected at the source, in contrast to the administrative difficulty involved in determining the seller's basis and resulting gain from sales of property.<sup>61</sup>

FDAP income encompasses a broad range of types of gross income, but has limited application to gains on sales of property, including market discount on bonds and option

---

<sup>57</sup> Secs. 1293-1295.

<sup>58</sup> Sec. 1291.

<sup>59</sup> Sec. 1296.

<sup>60</sup> Secs. 871(a), 881. If the FDAP income is also ECI, it is taxed on a net basis, at graduated rates.

<sup>61</sup> *Commissioner v. Wodehouse*, 337 U.S. 369, 388-89 (1949). After reviewing legislative history of the Revenue Act of 1936, the Supreme Court noted that Congress expressly intended to limit taxes on nonresident aliens to taxes that could be readily collectible, *i.e.*, subject to withholding, in response to "a theoretical system impractical of administration in a great number of cases. H.R. Rep. No. 2475, 74th Cong., 2d Sess. 9-10 (1936)." In doing so, the Court rejected P.G. Wodehouse's arguments that an advance royalty payment was not within the purview of the statutory definition of FDAP income.

premiums.<sup>62</sup> Capital gains received by nonresident aliens present in the United States for fewer than 183 days are generally treated as derived from foreign sources and are thus not subject to U.S. tax, unless the gains are effectively connected with a U.S. trade or business; capital gains received by nonresident aliens present in the United States for 183 days or more<sup>63</sup> that are treated as U.S.-source are subject to gross-basis taxation.<sup>64</sup> In contrast, U.S-source gains from the sale or exchange of intangibles are subject to tax and withholding if they are contingent upon productivity of the property sold and are not effectively connected with a U.S. trade or business.<sup>65</sup>

Interest on bank deposits may qualify for exemption on two grounds, depending on where the underlying principal is held on deposit. Interest paid with respect to deposits with domestic banks and savings and loan associations, and certain amounts held by insurance companies, are U.S. source but are not subject to the U.S. withholding tax when paid to a foreign person, unless the interest is effectively connected with a U.S. trade or business of the recipient.<sup>66</sup> Interest on deposits with foreign branches of domestic banks and domestic savings and loan associations is not treated as U.S.-source income and is thus exempt from U.S. withholding tax (regardless of whether the recipient is a U.S. or foreign person).<sup>67</sup> Similarly, interest and original issue discount on certain short-term obligations is also exempt from U.S. withholding tax when paid to a foreign person.<sup>68</sup> Additionally, information reporting may not be required with respect to payments of such amounts.<sup>69</sup>

---

<sup>62</sup> Although technically insurance premiums paid to a foreign insurer or reinsurer are FDAP income, they are exempt from withholding under Treas. Reg. sec. 1.1441-2(a)(7) if the insurance contract is subject to the excise tax under section 4371. Treas. Reg. sec. 1.1441-2(b)(1)(i), -2(b)(2).

<sup>63</sup> For purposes of this rule, whether a person is considered a resident in the United States is determined by application of the rules under section 7701(b).

<sup>64</sup> Sec. 871(a)(2). In addition, certain capital gains from sales of U.S. real property interests are subject to tax as effectively connected income (or in some instances as dividend income) under the Foreign Investment in Real Property Tax Act of 1980, discussed *infra* at part II.B.3.

<sup>65</sup> Secs. 871(a)(1)(D), 881(a)(4).

<sup>66</sup> Secs. 871(i)(2)(A), 881(d); Treas. Reg. sec. 1.1441-1(b)(4)(ii).

<sup>67</sup> Sec. 861(a)(1)(B); Treas. Reg. sec. 1.1441-1(b)(4)(iii).

<sup>68</sup> Secs. 871(g)(1)(B), 881(a)(3); Treas. Reg. sec. 1.1441-1(b)(4)(iv).

<sup>69</sup> Treas. Reg. sec. 1.1461-1(c)(2)(ii)(A), (B). Regulations require a bank to report interest if the recipient is a nonresident alien who resides in a country with which the United States has a satisfactory exchange of information program under a bilateral agreement and the deposit is maintained at an office in the United States. Treas. Reg. secs. 1.6049-4(b)(5) and 1.6049-8. The IRS has published a list of the countries whose residents are subject to the reporting requirements, and a list of those countries with respect to which the reported information will be automatically exchanged. Rev. Proc. 2016-56, I.R.B. 2016-52 (December 27, 2016).

The 30-percent tax on FDAP income is generally collected by means of withholding.<sup>70</sup> Withholding on FDAP payments to foreign payees is required unless the withholding agent,<sup>71</sup> *i.e.*, the person making the payment to the foreign person receiving the income, can establish that the beneficial owner of the amount is eligible for an exemption from withholding or a reduced rate of withholding under an income tax treaty.<sup>72</sup> The principal statutory exemptions from the 30-percent withholding tax apply to interest on bank deposits, and portfolio interest.<sup>73</sup>

#### Income effectively connected with the conduct of a U.S. trade or business

Income from the conduct of a U.S. trade or business is taxed on a net basis if such income is effectively connected with the conduct of that trade or business. The determination of whether a foreign person is engaged in a U.S. trade or business is factual and considers whether the activity constitutes business rather than investing, whether sufficient activities in connection with the business are conducted in the United States, and whether the relationship between the foreign person and persons performing functions in the United States in respect of the business is sufficient to attribute those functions to the foreign person. Partners in a partnership and beneficiaries of an estate or trust are treated as engaged in the conduct of a trade or business within the United States if the partnership, estate, or trust is so engaged.<sup>74</sup>

Specific statutory rules govern whether income is ECI.<sup>75</sup> A foreign person engaged in a U.S. trade or business may have both U.S.-source and foreign-source income that is ECI. In the case of U.S.-source capital gain and U.S.-source income of a type that would be subject to gross basis U.S. taxation, the factors taken into account in determining whether the income is ECI include whether the income is derived from assets used in or held for use in the conduct of the U.S. trade or business and whether the activities of the trade or business were a material factor in the realization of the amount (the “asset use” and “business activities” tests).<sup>76</sup>

---

<sup>70</sup> Secs. 1441 and 1442.

<sup>71</sup> Withholding agent is defined broadly to include any U.S. or foreign person that has the control, receipt, custody, disposal, or payment of an item of income of a foreign person subject to withholding. Treas. Reg. sec. 1.1441-7(a).

<sup>72</sup> Secs. 871, 881, 1441, and 1442; Treas. Reg. sec. 1.1441-1(b).

<sup>73</sup> Portfolio interest is any interest (including original issue discount) that is paid on an obligation that is in registered form and for which the beneficial owner has provided to the U.S. withholding agent a statement certifying that the beneficial owner is not a U.S. person. Sec. 871(h)(2). A reduced rate of withholding of 14 percent applies to certain scholarships and fellowships paid to individuals temporarily present in the United States. Sec. 1441(b). In addition to statutory exemptions, the 30-percent withholding tax with respect to interest, dividends or royalties may be reduced or eliminated by a tax treaty between the United States and the country in which the recipient of income otherwise subject to withholding is resident.

<sup>74</sup> Sec. 875.

<sup>75</sup> Sec. 864(c).

<sup>76</sup> Sec. 864(c)(2).

The extent to which a foreign person who is engaged in a U.S. trade or business may have foreign-source income that is considered to be ECI is limited in the Code to circumstances in which a threshold level of activities is met.<sup>77</sup> The foreign-source income generally is considered to be ECI only if the person has an office or other fixed place of business within the United States to which the income is attributable and the income is in one of the following categories: (1) rents or royalties for the use of patents, copyrights, secret processes or formulas, good will, trademarks, trade brands, franchises, or other like intangible properties derived in the active conduct of the trade or business; (2) interest or dividends derived in the active conduct of a banking, financing, or similar business within the United States or received by a corporation the principal business of which is trading in stocks or securities for its own account; or (3) income derived from the sale or exchange (outside the United States), through the U.S. office or fixed place of business, of inventory or property held by the foreign person primarily for sale to customers in the ordinary course of the trade or business, unless the sale or exchange is for use, consumption, or disposition outside the United States and an office or other fixed place of business of the foreign person in a foreign country participated materially in the sale or exchange.<sup>78</sup> Foreign-source dividends, interest, and royalties are not treated as ECI if the items are paid by a foreign corporation more than 50 percent (by vote) of which is owned directly, indirectly, or constructively by the recipient of the income.<sup>79</sup>

Deductions associated with gross ECI are permitted in determining taxable ECI, which is then taxed at the same graduated rates applicable to U.S. persons. For this purpose, the apportionment and allocation of deductions is addressed in detailed regulations. The regulations applicable to deductions other than interest expense set forth general guidelines for allocating deductions among classes of income and apportioning deductions between ECI and non-ECI. In some circumstances, deductions may be allocated on the basis of units sold, gross sales or receipts, costs of goods sold, profits contributed, expenses incurred, assets used, salaries paid, space used, time spent, or gross income received. More specific guidelines are provided for the allocation and apportionment of research and experimental expenditures, legal and accounting fees, income taxes, losses on dispositions of property, and net operating losses. Detailed regulations under section 861 address the allocation and apportionment of interest deductions. In general, interest is allocated and apportioned based on assets rather than income.

---

<sup>77</sup> Under each treaty, the United States is permitted to tax business profits only to the extent those profits are attributable to a U.S. permanent establishment of the foreign person. The threshold level of activities that constitute a permanent establishment is generally higher than the threshold level of activities that constitute a U.S. trade or business.

<sup>78</sup> Sec. 864(c)(4)(B).

<sup>79</sup> Sec. 864(c)(4)(D)(i).

## **II. DESTINATION-BASED TAXATION: ECONOMIC RATIONALE AND SELECTED PROPOSALS**

### **A. Introduction**

While the origin and destination principles, as described in Part I, have been traditionally considered principles of indirect tax (*e.g.*, sales and other consumption taxes), they may also be used to describe tax bases more generally. The tax base for a country with a pure origin-based tax consists of proceeds from the sale of goods and services produced in that country, regardless of where the sales occurred. In contrast, the tax base for a country with a pure destination-based tax consists of proceeds from the sale of goods and services to purchasers located in that country, regardless of where the goods and services were produced.<sup>80</sup>

The U.S. tax system is neither a pure origin-based tax system nor a pure destination-based tax system. However, it may be considered more origin-based in the sense that income from the sale of goods and services produced in the United States is generally part of the U.S. tax base, regardless of where the sales occur. It is not destination-based, as U.S. persons are subject to tax on their worldwide income, which may include income from the sale of goods and services neither produced nor purchased in the United States. As policymakers deliberate reforms to the U.S. system of taxing cross-border income, some have considered establishing a destination-based tax as a way of promoting certain economic policy goals and addressing problems arising from the more origin-based U.S. tax system. Part II.B explains the economic rationale for destination-based taxation, while Part II.C summarizes a number of proposals that would move the United States toward a destination-based tax.

---

<sup>80</sup> Sales-based formula apportionment systems that tax cross-border income on a worldwide basis, and allocate taxable income across countries based on the percentage of worldwide sales made to customers in those countries, have also been characterized as “destination-based” tax systems because tax liability is based on the location of sales. However, sales-based formula apportionment systems differs fundamentally from the destination-based tax systems discussed in this document, which, for any given country with such tax systems, generally exempt proceeds from sales made to customers outside that country. For further discussion, see Harry Grubert, “Destination-Based Income Taxes: A Mismatch Made in Heaven,” *Tax Law Review*, vol. 69, no. 1, Fall 2015, pp. 43-72.

## B. Economic Rationale for Destination-Based Taxation

### 1. Location of investment

A destination-based tax that excludes sales of goods and services to foreign markets from the tax base, regardless of where those products were made, can be viewed as promoting a certain form of neutrality with respect to where a business chooses to locate investments and property that serve foreign markets. For example, consider a U.S. business deciding where in the world to locate a factory that is intended to make products exclusively for sale in foreign markets. Under a destination-based tax, the U.S. tax system (but not necessarily the tax system in a foreign jurisdiction) would be neutral with respect to where the factory is located, since sales to foreign markets would be exempt from U.S. tax regardless of where the products are made. Therefore, proponents posit that the U.S. business's investment decision under a destination-based tax would be based more on non-tax economic factors, such as labor costs, transportation costs and local infrastructure, than it would be under present law, although certain elements of the U.S. and foreign tax systems—such as cost recovery rules, investment subsidies, and the tax treatment of cross-border income in the foreign tax system—may still influence investment decisions because such rules affect the U.S. business's after-tax returns. Relative to the present U.S. tax system, a destination-based tax system may promote investment in the United States by treating income from foreign sales more favorably than under present law.

Some may instead argue that, as a matter of policy principle, it is appropriate for the United States to maintain some origin-based taxation and tax income based on the location of production. For example, the economic source of income may be viewed as the proper basis of taxation, and if a good is produced in the United States, or intangible property is developed in the United States, then the United States may be seen as the primary economic source of income. In addition, U.S. policymakers may want to preserve neutral tax treatment between domestic sales and exports, so that a U.S. business that sells a product domestically is taxed similarly to a U.S. business that sells the product to an overseas customer. Furthermore, when producing goods and services in the United States, U.S. businesses may be relying on a number of resources that are, in whole or in part, provided for or funded by the U.S. government, including infrastructure, rule of law, and an educated workforce. Collecting tax on the sale of these products, whether they are sold in the U.S. market or a foreign market, may be viewed as a way for the business to compensate the United States government for the resources it has provided.

### 2. Income shifting

U.S. policymakers have grown increasingly concerned with erosion of the U.S. tax base that results from income shifting. "Income shifting" generally refers to the broad range of tax-planning techniques that minimize tax liability by shifting income from a high-tax jurisdiction (such as the United States) to a jurisdiction with a low- or zero-tax rate.<sup>81</sup> The shifting of income

---

<sup>81</sup> For further discussion on income shifting see Joint Committee on Taxation, *Present Law and Background Related to Possible Income Shifting and Transfer Pricing* (JCX-37-10), July 20, 2010; and Joint Committee on Taxation, *Present Law and Selected Policy Issues in the U.S. Taxation of Cross-Border Income* (JCX-51-15), March 16, 2015, pp. 51-56. The Organization for Economic Development and Cooperation ("OECD"), in conjunction with the Group of Twenty countries ("G20"), has done significant work on income shifting as part of its

derived from intangible property has been of particular concern to U.S. policymakers, as that type of shifting may be more easily accomplished than shifting the returns from tangible property. Depending on how income shifting is achieved, actual business operations may shift as well, in whole or in part. The shifting of real economic activity that may accompany income shifting is also of concern to policymakers.

A destination-based tax system would reduce and potentially eliminate the incentive to shift income to the extent that such shifting is due to a U.S. business's interest in minimizing the current U.S. tax burden on its foreign-source income. Since income from foreign sales are exempt under a destination-based tax, U.S. businesses would, for the most part, not be able to reduce their U.S. tax burden by shifting income abroad—there is little or no taxable income to shift. Limiting incentives for income shifting may also limit incentives to locate intangible property abroad. For example, U.S. businesses may not have an incentive to locate intangible property abroad to avoid current U.S. taxation of foreign-source income related to that intangible property because there generally would be no U.S. tax burden on such income under a destination-based tax; such income would not be part of the tax base.

While a destination-based tax system may address concerns with traditional income shifting, it may introduce new margins for distortions in the U.S. economy. Since U.S. exports would be exempt from tax under a destination-based tax system, U.S. businesses may have an incentive to overstate foreign sales and underestimate domestic sales. This may be viewed as another form of income shifting, except that instead of shifting income from the United States to a lower-tax jurisdiction, U.S. businesses would be potentially “shifting” income from the domestic sales ledger to the foreign sales ledger, where it will be untaxed. In addition, a destination-based tax system would introduce new administrative and compliance issues. Under present law, it is generally not necessary to track exports and imports for tax purposes. However, under a destination-based tax, U.S.-based businesses and tax authorities would need to determine whether income was derived from a domestic sale or an export, and whether an expense was related to a domestic purchase or an import.

More broadly, destination- and origin-based tax systems each face administrative pressures related to measuring the tax base correctly, because the determination of the tax base, however it is defined, may ultimately rely on subjective factors. Origin-based tax systems rely in concept on the location of production to define the tax base, and there may be administrative difficulties in allocating income correctly when the production of a particular good or service is dispersed. In particular, taxpayers may have an incentive to attribute more income to production (whether physical production, management of risk, or contractual risk shifting) in low- or zero-tax jurisdictions, such as through cost-sharing arrangements. Destination-based tax systems rely on the location of sales to define the tax base, and there may be administrative difficulties in accurately apportioning sales amounts between domestic and foreign sales, identifying the

---

Base Erosion and Profit Shifting (“BEPS”) Project. The OECD/G20 BEPS Project reports can be found at <http://www.oecd.org/tax/beps/beps-actions.htm>. For a discussion of the OECD/G20 BEPS Project, see Joint Committee on Taxation, *Background, Summary, and Implications of the OECD/G20 Base Erosion and Profit Shifting Project* (JCX-139-15), November 30, 2015.

location of sale, and enforcing the tax on imports purchased by U.S. consumers.<sup>82</sup> However, proponents of destination-based taxation may argue that the location of sale is easier to measure and identify than the location of production.

### **3. Cross-border mergers and acquisitions**

Establishing a destination-based tax may address concerns that U.S. tax rules have encouraged (1) the acquisition of U.S. corporations by foreign corporations and (2) the acquisition of foreign corporations by foreign acquirers rather than potential U.S. acquirers.<sup>83</sup> It is often argued that the U.S. tax burden on income earned through foreign subsidiaries of U.S. corporations is higher than what the tax burden would be on that income had the foreign subsidiaries been owned by a foreign corporation domiciled in a country that imposed little or no tax on active business income earned abroad. To the extent that this is the case, a U.S. corporation (and U.S.-owned assets more broadly) may generate higher after-tax returns under foreign ownership even if the pre-tax returns of the U.S. corporation are greater under U.S. ownership, potentially making it attractive for the U.S. corporation to sell itself to a foreign corporation. Thus, U.S. tax rules may make it mutually beneficial for foreign corporations to acquire U.S. corporations (and U.S. assets more broadly) from U.S. owners. In addition, U.S. tax rules may create a disadvantage for U.S. companies as they seek to acquire foreign companies (and foreign assets more broadly). If the after-tax returns of a foreign company are greater under foreign ownership than U.S. ownership, so that the foreign company is more valuable under foreign ownership, potential foreign acquirers may be able to outbid potential U.S. acquirers even if the pre-tax returns of the foreign company are greater under U.S. ownership. By eliminating the tax burden on income generated from foreign sales made by a U.S. company and its foreign subsidiaries, a destination-based tax may reduce or eliminate any differentials in after-tax returns and increase levels of U.S. ownership of assets, both domestic and foreign.

While a destination-based tax may address U.S. policy concerns related to cross-border mergers and acquisitions, such a tax may, depending on design features, contribute to inefficient merger and acquisition activity within the United States. For example, if losses are not refundable, certain export-intensive businesses (*i.e.*, businesses for which sales for export account for a large fraction of total sales) may have a strong tax incentive to merge with businesses with sufficient taxable income to take advantage of losses, even if such a merger is unattractive from a purely non-tax, economic perspective. This issue is discussed in more detail in Part III.C.3 of this document.

---

<sup>82</sup> The location of sale may be manipulated, depending on how it is defined.

<sup>83</sup> It is unclear if the acquisition of U.S. companies by foreign companies, and, more broadly, foreign ownership of U.S.-sited assets, hinders investment, employment, or growth in the United States. For a discussion of issues related to international tax rules and cross-border mergers and acquisitions, see Joint Committee on Taxation, *Present Law and Selected Policy Issues in the U.S. Taxation of Cross-Border Income* (JCX-51-15), March 16, 2015; and Joint Committee on Taxation, *Description of Certain Revenue Provisions Contained in the President's Fiscal Year 2016 Budget Proposal* (JCS-2-15), September 2015, pp. 19-52.

#### **4. Efficiency and the source of tax revenue**

A destination-based tax may be a more efficient source of revenue than an origin-based tax similar to the current U.S. tax system. In general, any system of raising tax revenue alters the prices that taxpayers face with respect to consumption of goods, or the supply of labor or capital, and distorts economic decision-making.<sup>84</sup> These distortions generally lead to economic inefficiencies.<sup>85</sup> The loss in economic efficiency associated with taxation is directly related to the extent to which economic behavior is changed, so that, as a general matter, taxes that have minimal influence on economic behavior are less distortive than taxes that have significant influence on economic behavior. Similarly, taxes imposed on mobile tax bases may be less efficient than taxes imposed on less mobile bases. Since domestic consumption—the base of a destination-based tax—is generally less mobile than domestic production—the base of an origin-based tax—a destination-based tax system may be a more efficient way of raising revenue than the current, more origin-based U.S. tax system.<sup>86</sup>

---

<sup>84</sup> An exception to this is a “head tax” or “lump sum” tax, which imposes a fixed tax on all individuals without regard to any behavior. Such a tax reduces the after-tax resources available to the individual, but does not change prices and thus does not distort choices a consumer faces in the absence of the tax. For a review of measures of the efficiency cost of taxation, see Alan J. Auerbach and James R. Hines, “Taxation and Economic Efficiency,” in Alan J. Auerbach and Martin Feldstein (eds.), *Handbook of Public Economics*, vol. 3, pp. 1347-1421.

<sup>85</sup> Note that taxes may promote greater economic efficiency if they are used to correct for market failures (*i.e.*, instances where market outcomes lead to too excess or insufficient levels of a particular economic activity).

<sup>86</sup> For general insight into the relationship between mobility of the tax base and the efficiency of a tax, see Alan J. Auerbach and James R. Hines, “Taxation and Economic Efficiency,” in Alan J. Auerbach and Martin Feldstein (eds.), *Handbook of Public Economics*, vol. 3, pp. 1347-1421. In a somewhat different context, some economists argue that tax regimes that provide preferential tax treatment to mobile income may be desirable because they limit tax competition for less mobile income, for which tax competition is potentially more distortionary from the perspective of taxation and economic efficiency. See Michael Keen, “Preferential Regimes Can Make Tax Competition Less Harmful,” *National Tax Journal*, vol. 54, no. 4, 2001, pp. 757-762.

## C. Selected Destination-Based Tax Proposals for the United States

### 1. Growth and Investment Tax

The 2005 Report of the President's Advisory Panel on Federal Tax Reform, “Simple, Fair, and Pro-Growth: Proposals to Fix America’s Tax System,”<sup>87</sup> in its Growth and Investment Tax Plan, provides for a 30 percent rate of tax on all businesses regardless of form.<sup>88</sup> This rate applies to business cash flow, and provides for immediate expensing of all inputs and labor costs, and recognition of revenues on a cash flow basis. For businesses, interest expense is not deductible; interest income, dividends and capital gains are not includable. Losses can be carried forward, are not refundable, and earn interest. In contrast, individuals are taxed on their interest income, dividends and capital gains at half the corporate rate of tax. Financial firms are taxed on a cash flow basis for their loans and deposits, interest income and expense.

This combination of factors creates a cash flow business tax to which a destination principle is applied so that export revenues are not includable in cash flow, and the cost of imports is not deductible from cash flow.<sup>89</sup> The Growth and Investment Tax taxes consumption that occurs in the United States, regardless of where the item consumed is produced.<sup>90</sup> Refunds are provided to firms for losses generated by the exclusion of revenues from exports.

### 2. Auerbach proposal<sup>91</sup>

This proposal has two components, a cash flow component and a destination principle component.

Under the cash flow component, receipts are included when received and expenses are recognized when paid, modified as follows, “the tax would naturally be based on an accruals basis so that, for example, receipts are recorded when the obligation to pay is incurred, rather than when the cash is actually received. The accruals basis also applies to purchases, including of capital assets.”<sup>92</sup> Immediate expensing applies to real and net financial investment,<sup>93</sup> so that a

---

<sup>87</sup> November 2005.

<sup>88</sup> Sole proprietorships are taxed at the individual rate.

<sup>89</sup> 2005 Report of the President’s Advisory Panel on Federal Tax Reform, “Simple, Fair, and Pro-Growth: Proposals to Fix America’s Tax System,” p. 162.

<sup>90</sup> *Ibid.*, p. 168.

<sup>91</sup> As expressed in Alan Auerbach “A Modern Corporate Tax,” Center for American Progress, 2010 (“Auerbach 2010”) and Alan Auerbach, Michael P. Devereux, Michael Keen, John Vella, “Destination-Based Cash Flow Taxation,” Oxford University Centre for Business Taxation, 2017 (“Auerbach 2017”).

<sup>92</sup> Auerbach 2017, p. 9 fn. 5.

<sup>93</sup> Financial investment is excludes net equity issuance, and equals net lending minus net borrowing. Auerbach 2010, p. 8.

business has a current deduction for the net of investments over borrowings. Labor costs are deductible. Financial institutions are taxed in the same manner as other firms.<sup>94</sup> All flows into and out of the firms are netted, except for transactions involving the equity of the taxpaying business, which are excluded from the calculation.<sup>95</sup>

The destination principle provides for taxation of a business based on where a business's output is used, and has two components: a territorial component and a cross-border component.<sup>96</sup> The territorial component provides that no tax is imposed on net cash flow that is outside the United States. The cross border component provides that no cross-border transaction, that is, imports or exports, is recognized by the tax system, whether a sale or a purchase. This principle also applies to financial flows, so that cross-border lending, borrowing, and interest payments or receipts are excluded from the tax base. Financial flows crossing borders can be treated in two ways: ignored by the system, or border adjustments could be imposed on them.

This proposal is silent on tax rates. It does suggest uniform tax rates on all forms of investment income at the individual level.<sup>97</sup> It also suggests that non-C corporation business entities should have the same system imposed on them as is imposed on C corporations, or at least imposed on those entities that "serve as substitutes for C corporations."<sup>98</sup>

### 3. Blueprint<sup>99</sup>

The House Republican's Tax Reform Task Force Blueprint (the "Blueprint") provides for a 20 percent corporate tax rate. The corporate AMT is repealed. Pass-through businesses are taxed at a maximum 25 percent rate. These rates are applied to a calculation that includes deductions for "...investments in tangible property (such as equipment and buildings) and intangible assets (such as intellectual property)."<sup>100</sup> Land cannot be expensed. Wages are deductible. Interest expense is deductible only to the extent of interest income, with unlimited carryforward of the disallowed interest expense. Net operating losses are allowed to be carried forward with interest, but may not be carried back; they are not refundable and may only be claimed up to 90 percent of the taxpayer's net taxable income for a given year. Corporations are taxed on capital gain and dividend income at corporate rates. Individuals are taxed on half their interest income, dividends and capital gains. For U.S. corporations with foreign subsidiaries,

---

<sup>94</sup> Whether the accrual overlay would apply to this type of flow as well is not specified.

<sup>95</sup> Auerbach 2010, p. 9.

<sup>96</sup> Auerbach 2010, p. 10.

<sup>97</sup> Auerbach 2010, p. 13.

<sup>98</sup> Auerbach 2010, p. 14.

<sup>99</sup> For a description of the Blueprint, see House Republic Tax Reform Task Force, "A Better Way: Our Vision for a Confident America," June 24, 2016, available at [https://abetterway.speaker.gov/\\_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf](https://abetterway.speaker.gov/_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf).

<sup>100</sup> Blueprint, p. 26.

there is a 100 percent exemption for dividends from those foreign subsidiaries. The foreign personal holding company rules continue in operation to tax currently passive income earned offshore.

This combination of factors creates something akin to a territorial cash flow corporate tax to which the Blueprint applies the destination principle, that is products, services, and intangibles that are exported outside the United States are not subject to U.S. tax regardless of where they are produced. In addition, goods, services, and intangibles that are imported into the United States are subject to U.S. tax regardless of where they are produced.<sup>101</sup>

---

<sup>101</sup> Blueprint, pp. 27-28.

### **III. ECONOMIC ANALYSIS OF BORDER ADJUSTMENTS**

#### **A. Introduction**

The destination-based tax proposals described in Part II have a number of features related to the taxation of cross-border income, the two principal ones being (1) exemption from U.S. tax on active business income earned by foreign subsidiaries (*i.e.*, a dividend exemption system) and (2) a border adjustment for imports and exports. If the United States were to adopt a dividend exemption system without the border adjustment, income and economic activity may shift from the United States to overseas, as it may be more attractive, from a tax perspective, to serve both foreign and U.S. markets from a foreign country: Sales by a U.S.-sited company to domestic and foreign customers would generally be subject to U.S. tax, while sales by a foreign-sited subsidiary of a U.S. company to domestic and foreign customers would potentially not be subject to U.S. tax. A border adjustment may limit tax-motivated shifting of income and economic activity arising from the adoption of a dividend exemption system, as sales by the U.S.-sited company and foreign-sited company would be treated similarly, whether the sales are to a U.S. or foreign customer.

While a dividend exemption system and border adjustment are interrelated features of a destination-based tax, this part of the document provides a general economic analysis of border adjustments only, and in particular does not examine the cash flow features of the destination-based tax proposals or their proposed move to a dividend exemption system.<sup>102</sup> Therefore, the analysis in this part should not be viewed as a comprehensive analysis of the destination-based tax proposals, or even a comprehensive analysis of the cross-border provisions of the proposals.

---

<sup>102</sup> For an analysis of cash flow and consumption-based taxes, see Joint Committee on Taxation, *Background on Cash-Flow and Consumption-Based Approaches to Taxation* (JCX-14-16), March 18, 2016. For a discussion of policy issues relevant for a move to a dividend-exemption system, see Joint Committee on Taxation, *Present Law and Selected Policy Issues in the U.S. Taxation of Cross-Border Income* (JCX-51-15), March 16, 2015.

## B. U.S. Cross-Border Transactions and Investments

This section discusses the economic relationship between trade deficits and cross-border investment as background to the discussion of the trade effects of border adjustments. In doing so, it also presents data relating to the scope of the international trade sector in the United States economy and briefly reviews trends in the current account (the trade surplus or deficit).

### 1. National income accounting<sup>103</sup>

In popular discussion of trade issues, much attention is given to the trade deficit or surplus, that is, the difference between the economy's exports and imports. The United States has generally reported trade deficits since 1977. Also, since 1977, the United States has generally recorded net capital inflows from abroad. Capital inflows can take the form of foreign purchases of domestic physical (or "real") assets, or of domestic financial assets, such as equity interests or debt instruments.

These two phenomena, trade balances and capital inflows, are related to each other. More generally, trade deficits, capital inflows, investment, savings, and income are all connected in the economy. The connection among these economic variables can be examined through the "national income and product accounts," which measure the flow of goods and services and income in the economy.<sup>104</sup>

The value of a country's total output must be either consumed domestically (by private individuals and government), invested domestically, or exported abroad. If a country consumes and invests more than it produces, the country must be a net importer of goods and services. If the imports are all consumption goods, in order to pay for those imports, the country must either

---

<sup>103</sup> Prior to 1999, the U.S. Department of Commerce, Bureau of Economic Analysis reported and described international transactions by reference to the "current account" and the "capital account." Beginning in June 1999 the Bureau of Economic Analysis adopted a three-group classification to make U.S. data reporting more closely aligned with international guidelines. The three groups are labeled: current account; capital account; and financial account. Under this regrouping, the "financial account" encompasses all transactions that used to fall into the old "capital account," that is, the financial account measures U.S. investment abroad and foreign investment in the United States. Under the new system, the "current account" is redefined by removing a small part of the old measure of unilateral transfers and including it in the newly defined "capital account." The capital account consists of capital transfers and the acquisition and disposal of non-produced, non-financial assets. For example, the capital account includes such transactions as forgiveness of foreign debt, migrants' transfers of goods and financial assets when entering or leaving the country, transfers of title to fixed assets, and the acquisition and disposal of non-produced assets such as natural resource rights, patents, copyrights, and leases. In practice, the Bureau of Economic Analysis believes that "capital account" transactions will be small in comparison to the current account and financial account.

<sup>104</sup> The national income and product accounts measure the flow of goods and services (product) and income in the economy. The most commonly reported measure of national economic income is gross domestic product ("GDP"). Related to GDP is gross national product ("GNP"). GDP can be understood as the total annual value of goods and service produced in the United States, regardless of the nationality of the owners of the factors of production (land, labor, and capital) that are required to produce the goods and services. GNP, by contrast is the total annual value of goods and services produced anywhere in the world where the relevant factors of production are owned by U.S. persons. Thus, wages earned by a U.S. resident from temporary work abroad, or dividends received by a U.S. person from an investment in a foreign corporation, constitutes part of GNP but not GDP.

sell some of its assets or borrow from foreigners. If the imports are investment goods, foreign persons must be the owners of, or lend money to the owners of, these investments. Thus, a country that runs a trade deficit must experience foreign capital inflows, as foreign persons purchase domestic assets, make equity investments, or lend funds (purchase debt instruments).

In other words, if the country is a net importer, it must attract capital inflows to pay for those imports. If the country is a net exporter, it must have capital outflows to dispose of the payments it receives for its exports. For example, when the United States imports more than it exports, the United States pays for the imports with dollars. If foreigners are not buying U.S. goods or services with the dollars, they will use the dollars to purchase U.S. assets. (Another way of viewing these relationships is that dollars flowing out of the U.S. economy in order to purchase goods or to service foreign debt must ultimately return to the economy as payment for exports or as capital inflows.)

The connection between capital flows and the goods and services in the economy can also be understood by concentrating on the sources of funds for investment. Investment in the United States must come either from domestic saving (that is saving by U.S. persons) or from foreign investors. If domestic saving is less than investment in the United States, that difference must be attributable to net capital inflows from foreign persons. In government reporting, such net capital inflows from foreign persons are termed “net foreign borrowing” even though the capital inflows may take the form of either equity investments or loans.

## Relation of Trade Deficits to Cross-Border Capital Flow

In formal terms, the connection between trade deficits and cross-border capital flows is as follows. In the following it is useful to use GNP, which includes cross border returns to investment, rather than the more commonly reported GDP concept.

One way to measure GNP is by expenditures on final product. By this measure,

$$(1) \text{GNP} = C + I + G + (X-M) + NI.$$

Equation (1) is an accounting identity which states that gross national product for a period equals the sum of private consumption expenditures (C), private investment expenditures on plant, equipment, inventory, and residential construction (I), government purchases of goods and services (G), net exports (exports less imports of goods and services and net interest payments to foreigners, or X-M), plus net investment income (the excess of investment income of U.S. persons received from abroad over investment income paid to foreign persons from investments located in the United States), denoted "NI" in equation (1).

An alternative is to measure GNP by the manner in which income is spent. By this measure,

$$(2) \text{GNP} = C + S + T.$$

Equation (2) is another accounting identity which states that gross national product for a period equals the sum of private consumption expenditures (C), saving by consumers and businesses (S), and net tax payments to the government (T) (net tax payments are total tax receipts less transfer, interest, and subsidy payments made by all levels of government).

Because both measures of GNP are simple accounting identities, the right hand side of equation (1) must equal the right hand side of equation (2). From this observation can be derived an additional national income accounting identity:

$$(3) I = S + (T - G) + (M - X) - NI$$

Equation (3) states that private investment equals private saving (S), plus public saving (T-G) and net imports (M - X), less net investment income. An intuitive interpretation of equation (3) is that it requires dollars to make investments in the United States and equation (3) identifies the sources of investment dollars. Equation (3) identifies private saving by U.S. persons, S, as one source of dollars and government saving, T - G, as another source of dollars. The next two terms in equation (3) identify dollars that result from cross-border transactions as additional sources of potential investment dollars. If imports, M, exceed exports, X, then, on net, dollars are in the hands of foreign persons and available for investment in the United States. If the earnings of foreign persons from their investments in the United States exceeds the earning of U.S. persons on their investments abroad, then NI is negative and, on net, dollars are in the hands of foreign person and available for investment in the United States. If the opposite is the case, NI is positive, there are not additional dollars available for investment. (If net investment income is reinvested in the economy then that reinvestment of course is reflected as savings, S.)

These relationships can be summarized as follows:<sup>105</sup>

$$\text{Net Foreign Borrowing} = \text{Investment} - \text{Saving}$$

$$\text{Net Foreign Borrowing} = (\text{Imports} - \text{Exports}) - \text{Net Investment Income}$$

For this purpose, imports and exports include both goods and services, and net investment income is equal to the excess of investment income received from abroad over investment income sent abroad.<sup>106</sup> The excess of imports over exports is called the “trade deficit” in goods and services. Net investment income can be viewed as payments received on previously-acquired foreign assets (foreign investments) less payments made to service previous net foreign borrowing.

If the investment in a country is larger than that country’s domestic saving, the country must be running a trade deficit, or the country must be increasing foreign borrowing, or both. Similarly, a country cannot run a trade surplus without also exporting capital, either by increasing its foreign investments, or by paying down (or reacquiring) previously acquired domestic assets or financial claims against the domestic economy held by foreign investors. Because the level of net investment income in any year is fixed by the level of previous foreign investment (except for changes in interest rates or investment earnings, *i.e.*, the profitability of equity), changes in investment or saving that are associated with capital inflows will have a negative impact on a country’s trade balance.

## 2. Trends in the U.S. current account

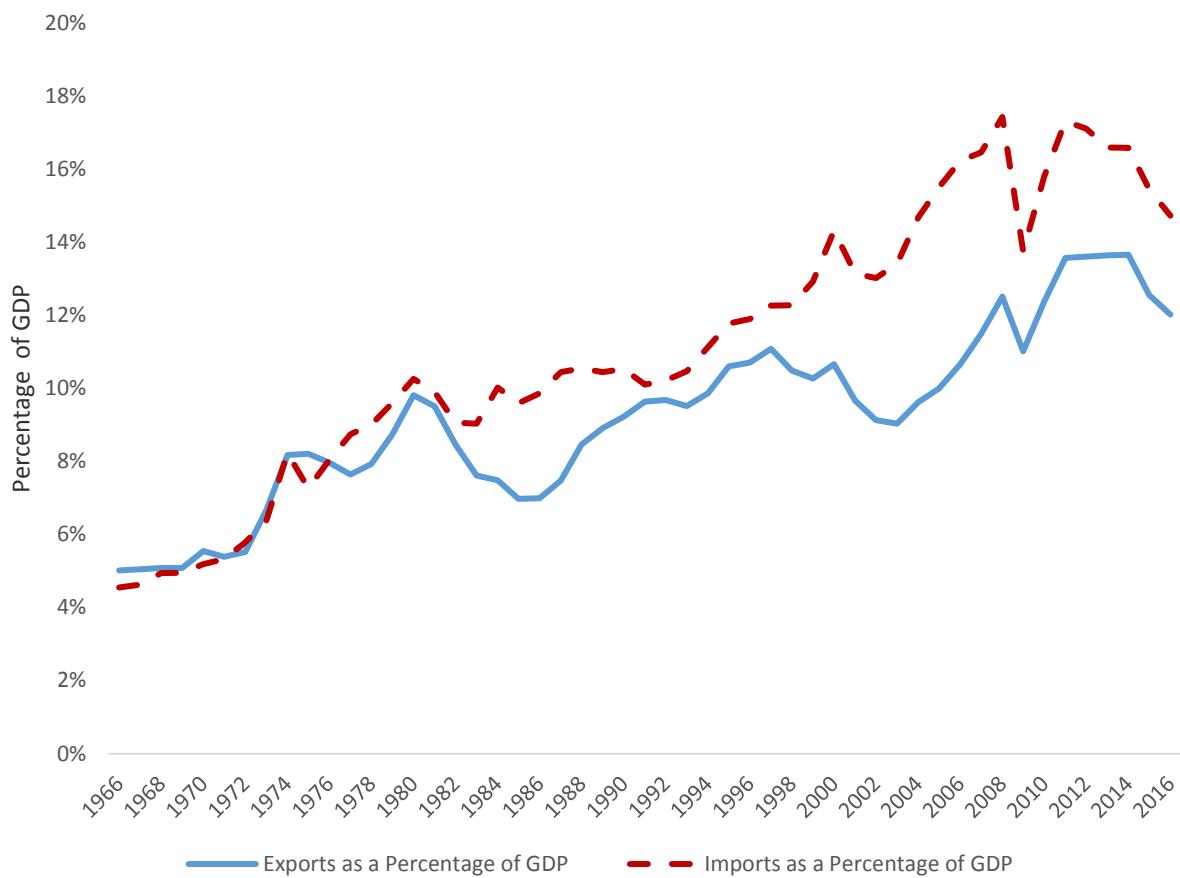
International trade in goods and services has increased as a share of the U.S. economy since the early 1960s. Figure 1 presents the value of exports from the United States and imports into the United States as a percentage of GDP for the period 1966-2016. As depicted in Figure 1, exports and imports each have risen from approximately five percent of GDP in 1966 to at least 12 percent in 2016. Imports have consistently exceeded 13 percent of U.S. GDP since 2001. Figure 1 also shows that the United States was generally a net exporter of goods and services prior to 1977. Since that time, the United States has been a net importer of goods and services.

---

<sup>105</sup> The equation ignores relatively small unilateral transfers such as foreign aid and assumes, without loss of generality, that the government budget is balanced).

<sup>106</sup> This equation in the text can be derived from equation (3) in the text box on trade deficits and cross-border capital flows, above, if the government budget is assumed to be balanced, that is, if  $G = T$ . It follows that if the government runs a deficit, that is, if  $G > T$ , for a given level of investment, saving, and net investment income, net foreign borrowing must be greater.

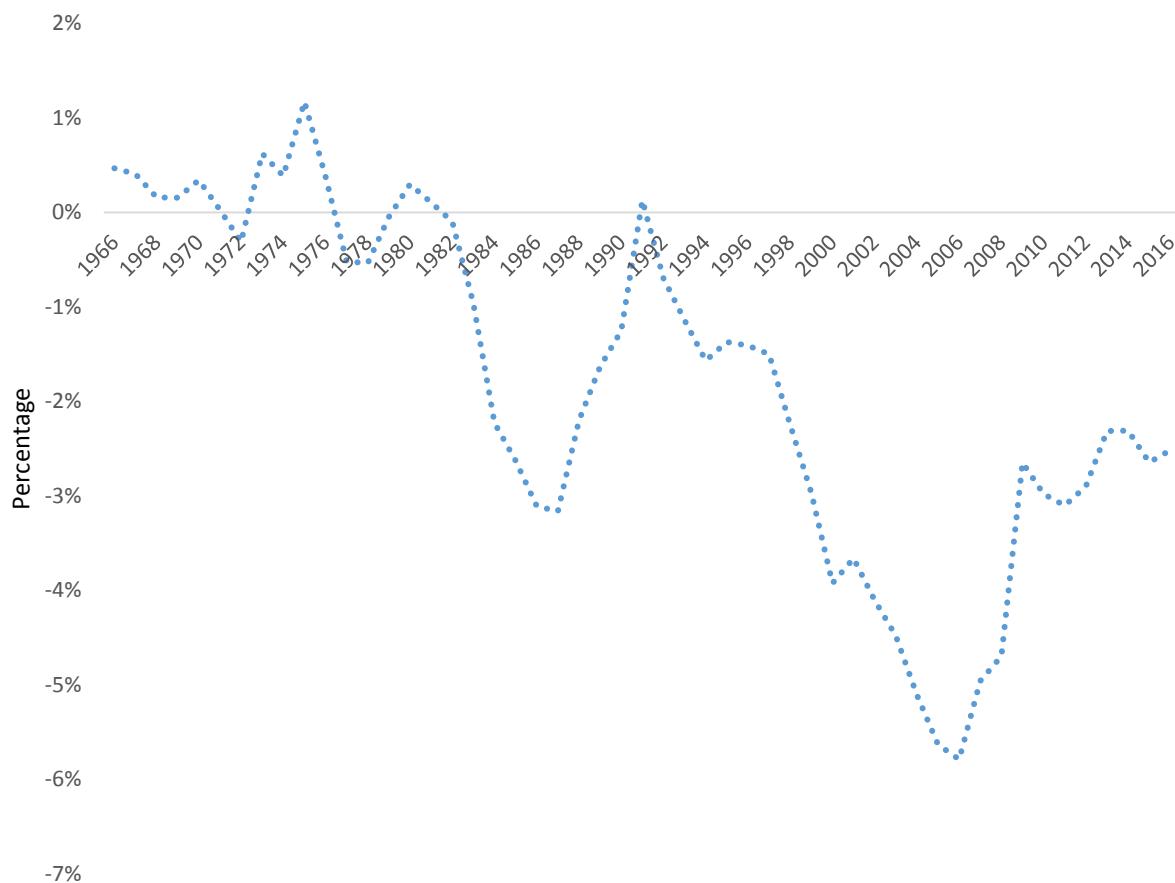
**Figure 1.—Exports and Imports as a Percentage of United States GDP,  
1966 – 2016**



Source: JCT staff calculations based on data from the Bureau of Economic Analysis.

The net trade position of a country is commonly summarized by its current account. The U.S. current account as a whole, which compares exports of goods and services and income earned by U.S. persons on foreign investments to imports of goods and services and income earned by foreign persons on their investments in the United States (plus unilateral remittances), was generally positive from 1966 through 1976, but generally has been in deficit since 1977. Figure 2 reports the current account balance of the United States for the period 1966 through 2016 as a percentage of GDP.<sup>107</sup>

**Figure 2.—United States Current Account Balance as a Percentage of GDP,  
1962 – 2016**



Source: JCT Staff calculations based on data from the Bureau of Economic Analysis.

---

<sup>107</sup> Two issues merit mention. Figure 2 shows the relationship of the current account balance to GDP, rather than reporting the current account balance in dollar terms, because percentages of GDP, unlike nominal dollar amounts, are not affected by inflation. In addition, the current account balance generally reflects purely market activity. However, in 1992 the United States received substantial payments from certain foreign governments related to the prosecution of the Persian Gulf War. These payments are included in the computation of the current account balance and account for the substantial reduction in the current account deficit for that year, as one can see in Figure 2.

### **3. Economic implications of trade deficits**

A trade deficit is not necessarily undesirable; what is important is the present and future consumption possibilities of the economy. Those consumption possibilities depend in part on whether the trade deficit is financing consumption or investment.

For example, if a country uncovers profitable domestic investment opportunities, then it will be in that country's interest to obtain funds from abroad to invest in these profitable projects.<sup>108</sup> If the economy currently does not have enough domestic savings to invest in these projects, it could reduce its consumption (generating more domestic saving) or look to foreign sources of funds (thus allowing investment without reducing current consumption).

For example, suppose new oil reserves that could be profitably recovered through increased investment are discovered in the United States. The investment may be financed by foreigners. In order to invest in U.S. assets, foreigners will have to buy dollars, thus increasing the value of the dollar. This dollar appreciation makes U.S. goods more expensive to foreigners, thereby reducing their demand for U.S. exports. At the same time, the dollar appreciation makes foreign goods cheaper for U.S. residents, increasing the demand for imports and resulting in a trade deficit. Eventually, the flow of capital will be reversed, as the U.S. demand for new investment falls, and foreigners receive interest and dividend payments on their previous investments.

The borrowing from foreign investors in the above example was used to finance investment. This borrowing did not reduce the living standards of current or future U.S. residents, because the interest and dividends that were paid to foreigners came from the return from the new investment. Standard economic theory predicts that the increased capital investment should lead to increases in domestic labor productivity, resulting in higher wages both at that time and in the future.

If, by contrast, foreign borrowing finances consumption instead of investment, there are no new assets created to generate a return that can support the borrowing. When the debt eventually is repaid, the repayments will come at the expense of future consumption.

For instance, consider a situation in which the domestic supply of funds for investment decreases because domestic saving rates fall. Foreign borrowing (for these purposes, debt or equity held by foreigners) in this case is not associated with increased investment, but instead is from investment by foreigners that was previously financed with domestic savings. Because the foreign borrowing is not associated with increased investment, future output does not increase, and interest and dividends on the investment will be paid to foreign persons at the expense of future domestic consumption. In this case, there may be an increase in the standard of living for current U.S. residents at the expense of a decrease in the standard of living of future U.S. residents.

---

<sup>108</sup> This scenario describes the experience of the United States in the mid to late 1800s, when foreign capital inflows financed much of the investment in railroads and other assets.

The difference between the case in which foreign investors fund incremental investment in the United States on top of domestic saving and the situation in which foreign investment simply replaces current domestic saving (which instead are currently consumed) can be summarized as follows. In the first case, the economy grows faster over time than it would without the incremental foreign investment and both U.S. and foreign persons share in that growth. In the second case, the economy continues to grow (but not as quickly as the first case) but all the future returns to the foreign investment belong to foreign persons. U.S. persons enjoy the immediate boost to their standard of living that comes from consuming money that they formerly saved, but future residents will not enjoy the returns from the money their predecessors consumed rather than saved.

During the period that foreign borrowing finances U.S. consumption, the United States runs a trade deficit. Although the United States could service its growing foreign debt by increased borrowing, and thereby generating larger trade deficits, in the long run trade deficits cannot keep growing. In fact, the United States must eventually run a trade surplus. If the United States imported more goods than it exported every year, there also would be an inflow of foreign capital every year. As the capital inflow grew from year to year, so would costs of servicing the claims held by foreign investors (*e.g.*, for example, interest payments on indebtedness). Eventually, foreigners would be unwilling to continue investing in the United States, and the value of the dollar would fall. The fall in the dollar would eliminate the trade deficit, and the United States would eventually run a trade surplus, so that the current account deficit (the sum of the trade deficit in goods and services and the net interest on foreign obligations) would be small enough for foreigners to be willing to lend again to the United States.<sup>109</sup>

Even when foreign investment finances domestic consumption, trade deficits and capital inflows themselves should not necessarily be viewed as undesirable, because the foreign capital inflows help to keep investment in the domestic economy, and hence labor productivity, from falling. (As noted in the preceding paragraph, however, this pattern cannot continue indefinitely.) For instance, the large inflow of foreign capital to the United States in the 1980s is widely viewed to have been a result of low U.S. saving rates. If the mobility of foreign capital had been restricted (through capital or import controls, for example), then the low saving rate could have led to higher domestic interest rates and lower rates of investment. That decreased investment would have led to decreases in future living standards because the lower growth rate of the capital stock would have resulted in lower growth rates of U.S. labor productivity. In this instance, the fact that foreign capital was not restricted and did finance U.S. investment helped mitigate some of the negative effects on economic growth of low domestic saving.

The above observations support the argument that the trade deficit does not in itself provide a useful measure of international competitiveness, since trade deficits and trade surpluses can have either positive or negative effects on the U.S. economy. The oil discovery example discussed above shows that even increases in a country's stock of exportable goods can

---

<sup>109</sup> An alternative adjustment would require U.S. interest rates to rise to make it more attractive for foreigners to invest in the United States. The rise in interest rates could also encourage increased domestic savings, helping to reduce the need for foreign investment funds. Some combination of dollar devaluation and rising interest rates is also possible.

have ambiguous effects on the trade deficit. If the discovery of oil also increases the demand for investment, then the trade deficit may actually increase in the short run. Increases in natural resources, advances in technology, increases in worker efficiency, and other wealth-enhancing innovations have ambiguous effects on the trade deficit in the short and medium run. Because these innovations increase the productivity of U.S. workers and lower production costs, they increase the attractiveness of U.S. goods, and may result in increased exports. To the extent these innovations increase the demand for investment, however, they can have the opposite effect on the trade deficit. Nonetheless, each of these innovations increases the output of the economy, and hence the incomes of U.S. residents.

## C. Economic Effects of Border Adjustments

### 1. Introduction

While border adjustments directly affect the taxation of exports and imports, basic economic models predict that, in equilibrium (*i.e.*, after prices have fully adjusted), border adjustments do not affect the level of exports and imports. (For convenience, this document refers to this prediction as the “trade-neutrality result.”) Exchange rates adjust to achieve the trade-neutrality result.<sup>110</sup> Whether this result holds in practice, and the amount of time it takes for the economy to reach equilibrium, are empirical questions that depend on actual features of the economy and policy details related to the border adjustment mechanism. While there are few empirical studies that rigorously evaluate the effects of border adjustments on exports and imports, there are a number of empirical studies on exchange rates and price adjustments that may help inform understanding of the possible (and potentially transitory) effects of border adjustments. The remainder of this section describes the trade-neutrality result, discusses the conditions under which it may or may not hold, and examines the potential effects of border adjustments in light of what is known about exchange rates and the economy.

### 2. Trade-neutrality result

#### General intuition

From an economic perspective, a border adjustment can be broken down into two components—an export subsidy<sup>111</sup> and an equivalent import tax—although there need not be an explicit statutory subsidy and tax.<sup>112</sup> If implemented in the United States separately, each component is expected to affect trade levels and lead to an appreciation of the dollar, but, according to the trade-neutrality result, the combination of the two policies will lead to an appreciation of the dollar that neutralizes the impact of the export subsidy and the import tax on trade. To understand the trade neutrality result, it is useful to first analyze the effect of the export subsidy and import tax separately, and then see how the combination of the two policies is seen as having no effect on trade levels.

For purposes of the following discussion, assume that when a foreign consumer purchases an export from a U.S. business, it pays the business in dollars. Likewise, when a U.S.

---

<sup>110</sup> Trade neutrality may also result from changes in price levels and wages, but it is generally thought that exchange rates adjust more quickly than price levels or wages, so more attention is placed in this document on exchange rate adjustments as the force leading to trade neutrality.

<sup>111</sup> To be more precise, the export subsidy is a reduction in the U.S. tax assessed on export sales. The export subsidy rate is the percentage reduction in tax on those export sales.

<sup>112</sup> For example, the Growth and Investment Tax does not impose an explicit export subsidy and import tax, and instead exempts export sales from tax and denies a deduction for purchases of imports. However, these two features of the Growth and Investment Tax generally have the same economic effect as an explicit export subsidy and import tax.

consumer purchases an import from a foreign business, assume that the U.S. consumer pays the foreign business in the foreign currency.

Adopted in isolation, the export subsidy increases the after-subsidy profit that U.S. businesses receives on their exports. U.S. businesses can now lower the price they charge on exports and maintain the same profit levels as before. Assume they do lower the dollar price they charge on their exports. Then, the price of U.S. products in foreign markets becomes cheaper. Foreign consumers will increase their demand for U.S. exports as a result of the price reduction. The increase in demand for U.S. exports also increases the demand for dollars by foreigners. As foreign consumers demand more U.S. exports, which have become cheaper, they will also demand more dollars, which will make the dollar more expensive in the foreign currency and result in an appreciation of the dollar against that foreign currency. The appreciation of the dollar makes U.S. imports cheaper, and U.S. consumers will purchase more imports from foreign businesses. In the end, the export subsidy increases the levels of U.S. exports and imports by the same amount, and results in an appreciation of the dollar.<sup>113</sup>

Adopted in isolation, the import tax raises the after-tax cost that U.S. consumers pay for imports into the United States. This will cause U.S. consumers to demand fewer imports. As U.S. consumers demand fewer imports, they will also demand less foreign currency, which makes foreign currencies cheaper and results in a depreciation of foreign currencies against the dollar, or stated differently, an appreciation of the dollar against foreign currencies. As the dollar appreciates, U.S. exports become more expensive in foreign markets, resulting in a decrease in demand for U.S. exports. In the end, the import tax lowers the levels of U.S. imports and exports by the same amount, and results in an appreciation of the dollar.<sup>114</sup>

When the export subsidy and the import tax are implemented together, as is the case under a border adjustment, the increase in U.S. exports and imports that one would expect from an export subsidy is exactly offset by the decrease in U.S. exports and imports that one would expect from an import tax. The export subsidy and the import tax each contribute to an appreciation of the dollar. Overall, then, border adjustments are expected in theory to be trade-neutral—they have no impact on the levels of U.S. exports and imports—and result in greater appreciation of the dollar than either policy would on its own. Stated differently, border adjustments result in an appreciation of the dollar that neutralizes the trade effects of the underlying, parallel export subsidy and import tax.

---

<sup>113</sup> The appreciation of the dollar attenuates some, but not all, of the initial increase in demand for U.S. exports that results from the export subsidy. In other words, export levels are greater than before the implementation of the export subsidy, but lower than they would be in the absence of dollar appreciation.

<sup>114</sup> The appreciation of the dollar attenuates some, but not all, the initial decline in the demand for imports by U.S. consumers that results from the import tax. In other words, import levels are lower than before the imposition of the import tax, but they are not as low as they would be in the absence of dollar appreciation.

### Technical discussion<sup>115</sup>

To understand the trade-neutrality result at a more technical level, consider a country in which there are no initial cross-border holdings of assets or liabilities. In this scenario, the present value of a country's exports must equal the present value of the country's imports. This condition is sometimes referred to as the trade balance condition and is similar to the condition that, in equilibrium, supply equals demand in perfectly competitive economies. In any particular time period, a country's exports may not equal its imports—Part III.B.1 describes how this may occur when capital flows in and out of an economy—but in the long run, the present value of exports must equal the present value of a country's imports. The results described in this section hold when, as a special case, trade is balanced in each time period, but the discussion is framed in terms of present value for generality.

As discussed above, a border adjustment has two components: an import tax and an equivalent export subsidy.

If a country imposes a permanent, uniform import tax (*i.e.*, an import tax that applies equally and at a single rate to all imports), the tax will reduce the present value of imports, but because the trade balance condition must hold, the present value of exports falls by the same amount. The trade balance equals zero in present value, but the levels of imports and exports have fallen equally in present value terms. The same reduction in imports and exports would occur if a country imposed a permanent, uniform export tax at a rate equal to the import tax. The present value of exports would fall under such a policy, but for trade balance to hold, the present value of imports must also fall. Therefore, a permanent, uniform import tax and a permanent, uniform export tax are equivalent under basic economic conditions.

If a country instead imposes a permanent, uniform export subsidy, the present value of exports increases. Since the trade balance condition must hold, the present value of imports increases as well. If the export subsidy is imposed at a rate equal to the import tax then the increase in the present value of exports (and imports) under the export subsidy would be perfectly offset by the decrease in the present value of exports (and imports) under the import tax. The import tax raises the price of imports, while the export subsidy lowers the price of exports. Since the change in the price of imports, and the price of exports, are the same, the relative price of imports and exports is unchanged, thereby resulting in no change in either the present value of exports or imports. The combination of an import tax and an export subsidy is economically equivalent to a border adjustment.

For the trade balance condition to hold when a country enacts an import tax or an export subsidy of equal value (or both), exchange rates must adjust. In particular, the currency of the

---

<sup>115</sup> This section draws on Jagdish N. Bhagwati, Arvind Panagariya, and T. N. Srinivasan, *Lectures on International Trade*, second edition, MIT Press, 1998, pp. 215-218. The authors show that the trade-neutrality result also holds when a country is net borrower or net lender at the start of the analysis. Theoretical discussions of border adjustments and trade in the context of VATs can be found in Gene Grossman, “Border Tax Adjustments: Do They Distort Trade?” *Journal of International Economics*, vol. 10, no. 1, February 1980, pp. 117-128; and Martin Feldstein and Paul Krugman, “International Trade Effects of Value-Added Taxation,” in *Taxation in the Global Economy*, Assaf Razin and Joel Slemrod (eds.), University of Chicago Press, 1990, pp. 263-282.

country enacting the policies must appreciate relative to other currencies when either policy is enacted. A similar mechanism is at work in basic models of supply and demand, where supply and demand are equal in equilibrium. For supply to equal demand, prices adjust to ensure that there is no excess demand or excess supply. In the context of the trade balance condition, the price that is adjusting is the price of one currency expressed in terms of the other currency (*i.e.*, the exchange rate). In the case where a country enacts a border adjustment, which, again, is a combination of an export subsidy and an import tax, the country's currency appreciates so that exports and imports are unaffected.

### **3. Application of the trade-neutrality result to the Blueprint**

#### Introduction

The economic equivalence of import taxes and export taxes in the basic model described above, which underpins the trade neutrality result, hinges on a number of assumptions. The export subsidy and import tax must be applied at equivalent rates. In addition, the export subsidy and import tax must be uniform and apply to all exports and imports. The Blueprint may deviate from these policy assumptions in a number of respects, which may therefore limit the applicability of the trade-neutrality result. However, the extent to which these deviations result in economically significant departures from the trade-neutrality result is an empirical question.

#### Different tax rates on business income

The export subsidy and import tax may not be applied at equal rates under the Blueprint. The Blueprint does not tax business income uniformly. Business income earned by C corporations is taxed at 20 percent, while business income earned by other entities is taxed at a maximum of 25 percent. However, the effective tax rate on corporate income should also reflect the tax on distributions to shareholders. Thus, the rate differential between corporate and noncorporate income may be less than it otherwise appears. On the other hand, some noncorporate income may be taxed at rates lower than 25 percent. Since businesses face varying tax rates, the export subsidy rate and import tax rate potentially vary across businesses. Therefore, the border adjustment may affect the pattern and level of exports and imports and may have positive or negative effects on businesses.

#### Tax treatment of losses

Even if all business income were taxed equally under the Blueprint, the export subsidy and import tax may nonetheless not be applied at equal rates across all businesses because (1) certain businesses may be in loss positions and (2) losses are not refundable under the Blueprint (although losses can be carried forward indefinitely with interest). As a result, certain businesses with sufficient taxable income may receive export subsidies, or may be taxed on their imports, at the full rate, while certain businesses in loss positions may have an effective export subsidy rate, or import tax rate, that is less than the full rate.<sup>116</sup> (The effective export subsidy rate takes into

---

<sup>116</sup> The discussion of the import tax rate of the Blueprint assumes that the tax on business imports is accomplished through the denial of a deduction instead of an excise tax on imports. Unlike exporters, whose taxable income is reduced under the Blueprint, importers' taxable income increases if the cost of imports is not deductible.

account the ability to use losses to offset taxable income.) For example, if the import tax is not imposed as an excise tax, and is instead accomplished through a denial of a deduction, there may be cases in which no import tax is collected from taxpayers with sufficiently high levels of losses in a given year (*i.e.*, their losses are sufficiently high that a denial of a deduction on their imports does not change their tax liability in a given year).<sup>117</sup>

The inapplicability of the trade-neutrality result when businesses have insufficient taxable income is potentially more problematic in the case of export-intensive businesses (*i.e.*, businesses for whom exports constitute a large share of overall sales). Take, as an extreme case, a pure exporter which sells only for export, and assume that it does not import any inputs. Under the Blueprint, the pure exporter will be in a permanent loss position, as it has deductible expenses but no taxable income, and while it may have positive after-tax profits (in which case it can profitably sustain its operations), the fact that losses are not refundable reduces the effective export subsidy rate below the full rate. The discussion of export subsidy rates in the context of the trade-neutrality result assumes that losses are refundable. The lack of refundability of losses offsets some of the value of the export subsidy, so that the effective export subsidy rate is below the full rate. The example of the pure exporter may not be found in practice, however. As an empirical matter, firms that export also import as well, and large firms are responsible for the bulk of exports and imports.<sup>118</sup> In 2015, companies that both exported and imported goods accounted for 85.4 percent of the known goods export value and 93.0 percent of the known goods import value.<sup>119</sup> Among these companies, 5.7 percent were large companies (those employing 500 or more workers), but these large companies accounted for 77.6 percent of the known goods export value and 72.5 percent of the known goods import value.<sup>120</sup>

The lack of refundability of losses may result in tax-motivated changes in business operations. In particular, export-intensive businesses may, through merger or acquisition, combine with businesses with taxable income under the Blueprint (*e.g.*, businesses that are

---

Therefore, the inapplicability of the trade-neutrality when businesses have insufficient taxable income is more likely to occur for export-intensive firms than import-intensive firms (that is, businesses for whom imports constitute a large share of overall expenses).

<sup>117</sup> The effect of the import tax may be realized in a later year, when the particular business has taxable income and has fewer NOL carryforwards to utilize. In this case, the effective import tax rate for the business may be closer to the full import tax rate, depending on when the business generates taxable income.

<sup>118</sup> Firms that either export or import, or do both, are generally larger and more productive than purely domestic firms, and offer higher wages. For a theoretical and empirical discussion of multinational enterprises and their engagement in international trade, see Andrew B. Bernard, J. Bradford Jensen, Stephen J. Redding, and Peter K. Schott, “Global Firms,” *Journal of Economic Literature*, forthcoming.

<sup>119</sup> U.S. Census Bureau, “A Profile of U.S. Import and Exporting Companies, 2014-2015,” *U.S. Census Bureau News*, April 4, 2017, p. 3. The profile for service companies is similar, but data on trade in services is less readily and regularly available. For a discussion of how trade in services differs from trade in goods, see Joseph Francois and Bernard Hoekman, “Services Trade and Policy,” *Journal of Economic Literature*, vol. 48, no. 3, September 2010, pp. 642-692.

<sup>120</sup> *Ibid.*, p. 4.

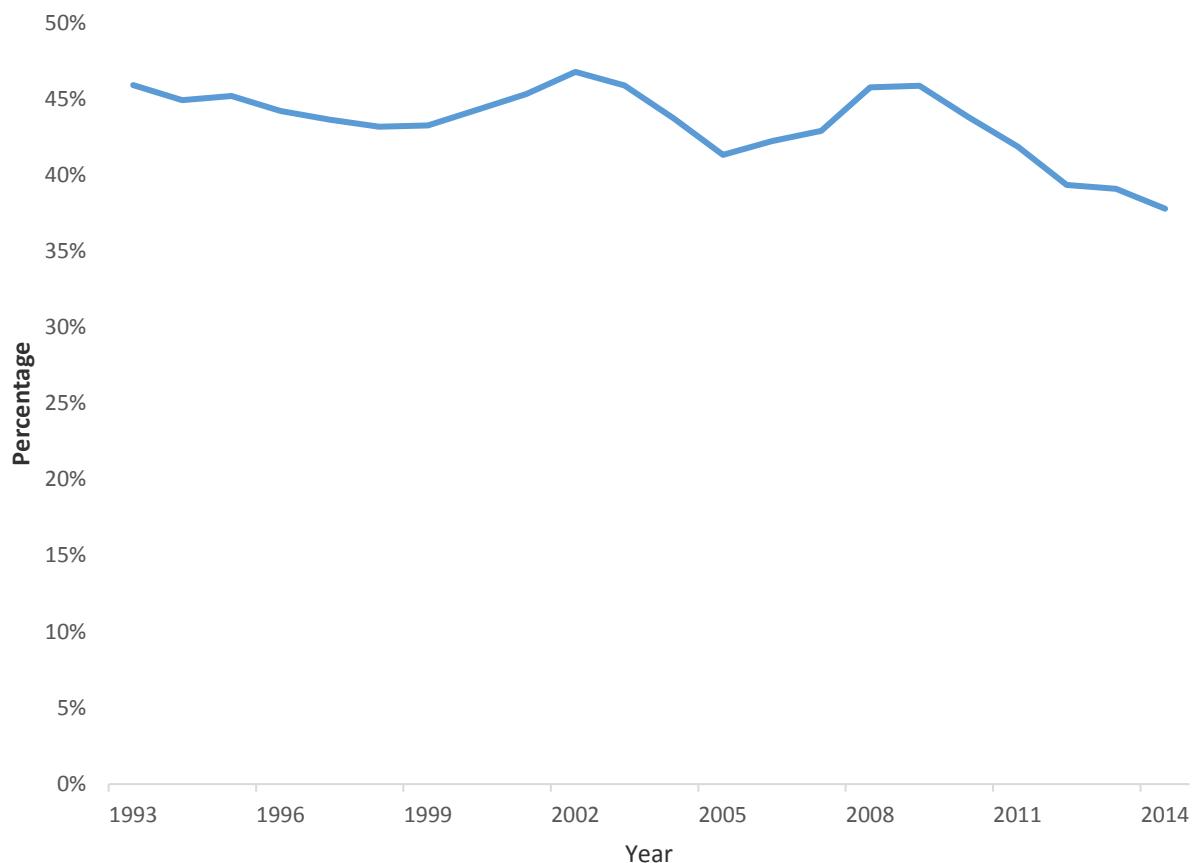
import-intensive or have significant domestic sales) so that the business group as a whole receives the full export rebate. However, the merger or acquisition may introduce distortions in the economy to the extent that they are driven by tax considerations rather than more fundamental, non-tax economic considerations. In fact, mergers or acquisitions that, on a pre-tax basis, reduce the value of the combined business entity (as compared to the sum of their stand-alone values), may still occur if they are attractive on an after-tax basis as expenses incurred by the export-intensive business are freed up to offset taxable income of the combined business entity.

Figure 3, below, shows, for any given year between 1993 and 2014, the fraction of C and S corporations reporting no net income (*i.e.*, zero or negative net income) for that year.<sup>121</sup> In 2014, 37.8 percent of corporations reported no net income. The extent to which these firms would have been, or not have been, in loss positions in 2014 had the Blueprint been in effect is unclear, as the Blueprint has a number of components that would increase or decrease net income. If the Blueprint's tax on imports was achieved through a denial of a deduction for imports, that would increase the amount of net income of these corporations to the extent that their expenses were attributable to imports. The denial of deductions for net interest expense would also increase net income. At the same time, the exemption from tax for exports, along with the expensing provisions of the Blueprint, would reduce the net income of these corporations.

---

<sup>121</sup> To clarify the figure, if a corporation reported negative net income for 2013 and positive net income for 2014, it would be counted as reporting no net income for 2013 and as reporting net income for 2014.

**Figure 3.—Share of Corporations with No Net Income,  
1993 – 2014**



Source: JCT staff calculations based on SOI data. The data is weighted by SOI population weights, which are based on the probability with which certain corporations are sampled. A corporation has no net income if its net income is zero or negative. Net income reported by C corporations is not directly comparable to net income reported by S-corporations. In particular, the net income of C corporations may include investment income (*e.g.*, interest income) while S-corporation tax returns generally provide that investment income be reported separately on the individual income tax returns of the owners.

A recent article on cash flow taxes, based on administrative tax data for C corporations from 2004 to 2013, may shed light on the extent to which businesses are moved into a permanent loss position as a result of the Blueprint's border adjustment.<sup>122</sup> The study estimates the static effect of moving to a stylized destination-based cash flow tax that, among other things, (1) makes imports nondeductible and exports nontaxable, (2) denies deductions for interest expense, and (3) allows taxpayers to deduct purchases of domestic intermediate goods, capital asset purchases, and inventory investment (among other expenses).<sup>123</sup> As part of the analysis, the

<sup>122</sup> Elena Patel and John McClelland, "What Would a Cash Flow Tax Look Like? Historical Panel Lessons," *Tax Notes*, January 23, 2017, pp. 439-450.

<sup>123</sup> The effect is static because it assumes no change in taxpayer behavior. For more details on the design of the stylized tax, see *ibid.*, pp. 442-443.

study estimates the effect of moving to a cash flow tax without a border adjustment, and the effect of moving to a cash flow tax with border adjustments, on the tax positions of C corporations. The difference in the two effects provides insight into how the border adjustment component of a destination-based cash flow tax, in isolation, affects the tax positions of C corporations.

For C corporations with more than \$1 billion in total income from 2004 to 2013, five percent would move from being taxable under present law to a loss position under the cash flow tax over that time period (with income and expenses aggregated across years for each corporation), while nine percent would move from being in a loss position under present law to a taxable position under the cash flow tax.<sup>124</sup> Under the border-adjusted cash flow tax, 10 percent of those corporations would move from being taxable under present law to a loss position under the border-adjusted cash flow tax, while 10 percent would move from being in a loss position under present law to a taxable position under the border-adjusted cash flow tax.<sup>125</sup> Therefore, for C corporations of this size, the border adjustment component of the stylized destination-based cash flow tax increases the percentage of corporations that would move from a taxable position to a loss position by approximately five percentage points.<sup>126</sup> Qualitatively similar results hold for C corporations with \$1 billion or less in gross receipts.<sup>127</sup> Therefore, while the stylized tax in the study is not identical to the Blueprint, the results of the study suggest that, absent changes in taxpayer behavior, a relatively small percentage of C corporations would be moved into a loss position as a result of the border adjustment component of the Blueprint. It may be the case that the loss positions of some of these corporations are sizeable, however.

#### Incomplete tax base

Depending on design details, the export subsidy and import tax may not, in effect, be applied to all exports and imports under the Blueprint. For example, the import tax base may be narrowed to the extent that insufficient tax is collected on direct-to-consumer imports due to administrative and compliance issues. If the export subsidy and import tax are imposed at equivalent rates, but the import tax is imposed on a narrower base, the dollar may appreciate by an amount less than the amount of appreciation if the export subsidy and import tax applied to all goods and services. To the extent that this is the case, the level of exports and imports would increase, as the increase in imports of goods and services that are not subject to the import tax (or for which insufficient import tax is collected) more than offsets the decrease in imports that are subject to tax. If the base of the import tax is narrowed, for whatever reason, appreciation in the

---

<sup>124</sup> *Ibid.*, pp. 448-449. The 2004-2013 time period overlaps with the 2007-2009 recession in the United States.

<sup>125</sup> *Ibid.*

<sup>126</sup> Note that C corporations that would be moved to a loss position under the cash flow tax would not necessarily be in a loss position under the border-adjusted cash flow tax, as the denial of deductions for imports may increase taxable income of those corporations and put them in a taxable position.

<sup>127</sup> Estimates of C corporations that remain in a taxable position, or remain in a loss position, under both present law and under the cash flow tax or border-adjusted cash flow tax do differ substantially across C corporations based on size.

dollar may be insufficient to offset the effect of the import tax on taxable goods and services (or goods and services for which an appropriate amount of import tax is collected, depending on the reason the import tax base is narrowed).

### Trade-neutrality result and changes in asset values

The discussion of the trade-neutrality result has largely assumed that there are no initial cross-border holdings of assets and liabilities. While the trade-neutrality result holds even when there are initial cross-border holdings of assets and liabilities—that is, border adjustments are not expected to affect the level of exports and imports in equilibrium—border adjustments may affect the U.S. economy by changing the value of U.S. holdings of foreign assets (*i.e.*, non-dollar-denominated assets), and foreign holdings of U.S. assets (*i.e.*, dollar-denominated assets). The large current account deficits that the United States has run over the past three decades has been financed by U.S. borrowing from the rest of the world, which has resulted in a large financial account surplus—the value of foreign holdings of U.S. assets exceeds the value of U.S. holdings of foreign assets. The appreciation of the dollar that is predicted by the trade-neutrality result will increase the value of the U.S. assets held by foreigners, and decrease the value of foreign assets held by U.S. residents. To the extent that changes in wealth affect other economic activity, such as consumption or investment, changes in wealth induced by dollar appreciation may affect the U.S. trade balance.

### Fixed exchange rate regimes

The trade-neutrality result generally assumes that exchange rates adjust flexibly in response to changes in the economic environment, such as the introduction of an import tax or export subsidy. If countries have fixed exchange rate regimes, and those countries do not adjust exchange rates to what they would need to be for the trade-neutrality result to hold, then the trade-neutrality result does not hold.

The effect of a border adjustment on trade patterns depends on the response of U.S. trading partners with fixed exchange rates. Take, for example, a trading partner (“Country A”) that pegs its currency to the dollar. Assume that trade is initially balanced between the United States and Country A, so that U.S. exports to Country A equal the U.S. imports from Country A.<sup>128</sup> If the United States were to introduce a border adjustment, and Country A maintained its currency peg at the same level, then U.S. imports from Country A would be more expensive—resulting in a decrease in U.S. imports from Country A—and U.S. exports to Country A would become cheaper, resulting in an increase in U.S. exports to Country A. Therefore, absent changes in Country A’s currency peg, a border adjustment in the United States would cause Country A to run a trade deficit with the United States. The trade deficit may have negative economic effects on Country A. Country A could respond to the border adjustment by allowing the currency to depreciate to restore trade balance. Whether Country A does this depends on the economic objectives of its currency peg. If the sole objective is to maintain a certain trade balance (*e.g.*, deficit or surplus) with the United States, then its trade balance with the United

---

<sup>128</sup> The conclusions of this section on fixed exchange rate regimes does not depend on the assumption that trade is initially balanced.

States prior to the introduction of a border adjustment may be an indicator of its target trade balance.<sup>129</sup> If this is the case, Country A will devalue its currency by the proportion required for the trade-neutrality result to hold. In other words, Country A will devalue its currency to undo the effect of the border adjustment to restore the trade balance it had with the United States prior to the border adjustment.

#### **4. Empirical studies on exchange rates and prices<sup>130</sup>**

##### Overview

A country's introduction of a border adjustment affects the economic environment through three channels: (1) the import tax, (2) the export subsidy, and (3) appreciation of the country's currency. While the tax changes increase the price of imports and decrease the price of exports, the exchange rate change reduces the price of imports and increase the price of exports. If the assumptions underlying the trade-neutrality result hold, the trade-neutrality result predicts that appreciation of a country's currency neutralizes the effect of a border adjustment. That is, the price effects of the tax changes are neutralized by the price effects of the exchange rate change. The assumptions underlying the trade-neutrality result are rarely, if ever, met in practice, but the extent to which the deviations from the assumptions result in economically meaningful deviations from trade neutrality, either in the short run or long run, is an empirical question.

There are few published empirical studies that directly assess the impact of border adjustments on exchange rates, prices, and trade levels.<sup>131</sup> In other words, few studies analyze the price effects of the tax and exchange rate changes resulting from a border adjustment. However, there are strands of the economics literature that provide general insight into how

---

<sup>129</sup> When choosing the level of a currency peg, countries with fixed exchange rate regimes may have a number of policy goals in mind—potentially related to inflation, employment, and economic growth—that, while potentially related to the trade balance, may not have a mechanical relationship with the level of the trade balance. For a discussion of the economic effects of exchange rate regime choice, and the difficulties of classifying exchange rates as either floating or fixed, see Michael W. Klein and Jay C. Shambaugh, “Exchange Rate Regimes in the Modern Era,” MIT Press, 2010.

<sup>130</sup> Most of the papers discussed in this Part III.C.4 of this document are reviewed in Ariel Burstein and Gita Gopinath, “International Prices and Exchange Rates,” in Gita Gopinath, Elhanan Helpman, and Kenneth Rogoff (eds.), *Handbook of International Economics*, vol. 4, Elsevier, pp. 391–451.

<sup>131</sup> Some academic proponents of destination-based taxes note that “there is, unfortunately, very little empirical evidence on the effects of [border tax adjustments] (or of significant tax changes more generally) on exchange rates—largely because these are rarely fundamental enough, relative to all the other factors that buffet exchange rates, to create reasonable prospect of being found in the data.” See Alan Auerbach, Michael P. Devereux, Michael Keen, and John Vella, “Destination-Based Cash Flow Taxation,” Oxford University Centre for Business Taxation, working paper 17/01, January 2017, p. 20. Some unpublished work that relates to the effect of border adjustments on trade include Mihir A. Desai and James R. Hines Jr., “Value-Added Taxes and International Trade: The Evidence,” working paper, January 2005; and Caroline Freund and Joseph E. Gagnon, “Effects of Consumption Taxes on Real Exchange Rates and Trade Balances,” Peterson Institute for International Economics working paper, April 2017. The latter paper examines the impact of increases in VATs and provides some evidence that increases are fully passed onto real exchange rates.

prices adjust in response to a change in exchange rates, and, in particular, the time path of the adjustment. The studies generally take changes in exchange rates as given—that is, unaccompanied by broader changes in economic policy—and examine their impact on prices. The literature on exchange rate pass-through estimates the impact of a given change in exchange rates on import prices (*i.e.*, price at the foreign port at which a good is delivered) and export prices (*i.e.*, price of the good at the U.S. port where the good is delivered).<sup>132</sup> The literature on purchasing power parity (“PPP”) studies the extent to which exchange rates reflect some fundamental value that is determined by the relative price of goods across countries.

The literatures on exchange rate pass-through and PPP shed light on the following type of question: If the dollar appreciates, without broader changes in policy such as the introduction of a border adjustment, what is the time path of the adjustment in export and import prices? The studies generally find that price adjustment is partial, even at horizons of two years and longer, although the effect of price adjustments in the long run are difficult to estimate precisely as the time horizon lengthens.<sup>133</sup> The findings are potentially relevant to understanding the economic effects of a border adjustment, at least for horizons of two years or less, as they show that, even if exchange rates adjust rapidly to changes in the economic environment, the prices of goods and services may not adjust as rapidly. However, the applicability of the findings to border adjustments is limited to the extent that the price effects of an exchange rate change that is not induced by policies that directly affect the pricing behavior of businesses (*i.e.*, they may reflect changes in monetary policy or financial markets) is different from the price effect of an exchange rate change induced by a border adjustment, which may directly affect the pricing behavior of business through changes in taxes paid by businesses.

### Exchange rate pass-through

The empirical literature on exchange rate pass-through generally estimates the percentage pass-through into the prices received by exporters, and the prices paid by importers, resulting from a percent change in exchange rates. While exchange rates may adjust quickly to changes in the economic environment, the prices of goods and services may be much “stickier” and adjust more slowly to changes in the economic environment.<sup>134</sup> For cross-border transactions,

---

<sup>132</sup> For U.S. imports and exports, import prices are calculated before insurance, freight, or duty are assigned. Export prices are calculated net of duties. For a description of the methodology used by the Bureau of Labor Statistics to construct import and export price indices, see Bureau of Labor Statistics, *BLS Handbook of Methods*, April 1997, pp. 154-159, available at <https://www.bls.gov/opub/hom/pdf/homch15.pdf>.

<sup>133</sup> In the context of the exchange rate pass-through literature, one study notes that “[i]t is empirically a challenge to estimate the ‘very’ long-run impact that exceeds two years.” Gita Gopinath, “The International Price System,” *Jackson Hole Symposium Proceedings*, Federal Reserve Bank of Kansas City, 2016, p. 141.

<sup>134</sup> For a discussion of price stickiness across countries, and for different types of prices, see Peter J. Klenow and Benjamin A. Malin, “Microeconomic Evidence on Price-Setting,” in Benjamin M. Friedman and Michael Woodford (eds.), *Handbook of Monetary Economics*, vol. 3A, Elsevier, 2011, pp. 231-284.

economists have generally found that the prices of imports and exports are sticky in the currency in which they are set.<sup>135</sup>

One series of studies has estimated exchange rate pass-through, at various time horizons, using monthly data collected by the Bureau of Labor Statistics (“BLS”) on the prices of U.S. goods imports and exports (similar data on U.S. services is unavailable).<sup>136</sup> One of the papers estimates that the average exchange rate pass-through for all U.S. goods imports from 1994 to 2014 was 22 percent after one month and 35 percent after two years, with most of the observed pass-through occurring in the first six months.<sup>137</sup> The study reports that over 90 percent of U.S. imports and exports are priced in dollars, and this fact is empirically important because there was a substantial difference in pass-through between dollar- and non-dollar-priced U.S. goods imports and exports at all time horizons under study.<sup>138</sup> Pass-through into U.S. goods imports priced in dollars was 0.3 percent after one month and 20 percent after two years, while pass-through for U.S. goods imports priced in foreign currency was approximately 100 percent throughout the first two years.<sup>139</sup>

Another paper in the series of studies relying on BLS price data provides further pass-through estimates for U.S. goods imports at horizons longer than two years, and for pass-through of exchange rate changes into the price of U.S. goods exports.<sup>140</sup> After approximately three to four years, pass-through was estimated to be 49 percent for U.S. goods imports priced in dollars

---

<sup>135</sup> Ariel Burstein and Gita Gopinath, “International Prices and Exchange Rates,” in Gita Gopinath, Elhanan Helpman, and Kenneth Rogoff (eds.), *Handbook of International Economics*, vol. 4, Elsevier, pp. 391-451. In a typical international transaction, the price of a good is first set in a particular currency, and at some later point in time, an invoice is written and final payment is made. Some research suggests that the price, invoice, and settlement of an international transaction all occur in the same currency. See Richard Friberg and Fredrik Wilander, “The Currency of Denomination of Export—A Questionnaire Study,” *Journal of International Economics*, vol. 75, no. 1, 2008, pp. 54-69.

<sup>136</sup> The BLS does not collect comprehensive price data on U.S. service imports and exports for purposes of computing import and export price indices. See Bureau of Labor Statistics, *BLS Handbook of Methods*, April 1997, pp. 154-159, available at <https://www.bls.gov/opub/hom/pdf/homch15.pdf>. The researchers generally excluded prices on intrafirm transactions from their analysis, and estimate exchange rate pass-through using changes in the exchange rate for dollars. For a discussion of how trade in services differs from trade in goods, see Joseph Francois and Bernard Hoekman, “Services Trade and Policy,” *Journal of Economic Literature*, vol. 48, no. 3, September 2010, pp. 642-692.

<sup>137</sup> Gita Gopinath, “The International Price System,” *Jackson Hole Symposium Proceedings*, Federal Reserve Bank of Kansas City, 2016, pp. 71-150.

<sup>138</sup> *Ibid.* pp. 94-102.

<sup>139</sup> The weights used to calculate the average exchange rate through for all U.S. goods imports, reported above, are not the same as the share of exports priced in dollars vs. foreign currency.

<sup>140</sup> Gita Gopinath, Oleg Itskhoki, and Roberto Rigobon, “Currency Choice and Exchange Rate Pass-Through,” *American Economic Review*, vol. 100, no. 1, pp. 304-336. This particular study uses BLS price data from 1994 to 2005.

and 98 percent for U.S. goods imports priced in foreign currency.<sup>141</sup> For U.S. goods exports, after approximately a year, the pass-through into foreign currency was 84 percent for exports priced in dollars and 25 percent for exports priced in foreign currency.<sup>142</sup> Some economists, evaluating the same data but employing a different methodology, estimated greater exchange rate pass-through into U.S. import prices and smaller exchange rate pass-through into U.S. export prices, compared to the studies described above.<sup>143</sup>

With respect to U.S. imports, the prices being studied are the prices paid by U.S. importers, not by U.S. consumers. There has been less research conducted on pass-through of exchange rate changes into the prices paid by U.S. consumers, which would require estimates of the import content of products purchased by U.S. consumers and estimates of the pass-through of changes in U.S. import prices on the prices charged by U.S. businesses.<sup>144</sup>

The findings described above on the pass-through of changes in the exchange rate for dollars—slow and incomplete average pass-through into the price of U.S. goods imports but quicker and more complete average pass-through into foreign currency for U.S. goods exports—suggest that an appreciation of the dollar (at least one that is unaccompanied by broader changes in policy such as a border adjustment) will have an asymmetric effect on trade flows that lasts perhaps one or more years. An appreciation of the dollar is generally expected to make U.S. imports cheaper and U.S. exports more expensive. With slow and incomplete pass-through of dollar appreciation into the price of U.S. goods imports, U.S. imports are not as cheap as they would be if pass-through were complete. With quicker and more complete average pass-through of dollar appreciation into the price of U.S. exports when converted to foreign currency, U.S. exports are not as expensive as they would be if pass-through were complete, but the short-run difference in price between the actual price of U.S. exports and their fully passed-through price is expected to be smaller than the difference in price between the actual price of U.S. imports and

---

<sup>141</sup> To be more precise, the pass-through being measured here is the lifelong pass-through—that is pass-through of the cumulative change in the exchange rate between when the price was first reported in the sample and its last observed price. The median duration of a good was three to four years in the sample, so this measure of pass-through may be viewed, in rough terms, as pass-through after approximately three to four years.

<sup>142</sup> To be more precise, the pass-through being measured is the pass-through conditional on a price change—that is, the pass-through of the cumulative change in the exchange rate between the time when the price of a good is first reported and when it is first changed. Not all goods change prices in the sample. The average price duration for U.S. imports was 10.6 months, so the pass-through conditional on a price change may be viewed, in very approximate terms, as the pass-through after approximately a year. The fact that pass-through is incomplete even conditional on a price change suggests that fixed costs of adjusting prices are not an important explanation for incomplete exchange rate pass-through.

<sup>143</sup> Emi Nakamura and John Steinsson, “Lost in Transit: Product Replacement Bias and Pricing to Market,” *American Economic Review*, vol. 102, no. 7, pp. 3277-3316.

<sup>144</sup> Most traded goods are not final consumer goods, but are instead goods purchased by businesses for final use (*i.e.*, investment goods such as machines) or for use as an input in the production of another good (*i.e.*, an intermediate input). Therefore, the U.S. importer, not a U.S. consumer, is typically the final purchaser of a U.S. import. See Charles Engel, “Commentary: The International Price System,” *Jackson Hole Symposium Proceedings*, Federal Reserve Bank of Kansas City, 2016, pp. 154-158.

their fully pass-through price. Stated differently, dollar appreciation (at least one that is not tax-induced) should result in a decrease in the price of U.S. imports and an increase in the price of U.S. exports, but the short-run increase in the price of exports could exceed the decrease in the price of imports. Therefore, when the dollar appreciates, the decline in U.S. exports, which are now more expensive, may be significantly larger (in relative terms) than the increase in imports, which are now cheaper.<sup>145</sup> The applicability of this prediction to border adjustments is unclear, however, as the discussion in this paragraph has implicitly assumed that there are no other changes to the economic environment besides the appreciation of the dollar, and that the appreciation of the dollar did not result from a broader policy change, such as the imposition of an export subsidy and import tax. For example, it may be the case that in the short run, under a border adjustment, the combination of dollar appreciation and the export subsidy results in a small reduction in the after-subsidy price of U.S. exports, but the combination of dollar appreciation and the import tax results in a more noticeable increase in the after-tax price of U.S. imports due to slow and incomplete exchange rate pass-through. In this hypothetical case, the level of exports would be largely unchanged but the level of imports would decline.

### Purchasing power parity (“PPP”)

Purchasing power parity, or PPP, refers to the empirical proposition that the national prices of goods across countries (measured by a nation’s price level) should be the same when expressed in a common currency. The basic idea is that, if the price of similar goods is different across countries when expressed in a common currency, it is possible for businesses and consumers to engage in international goods arbitrage by purchasing goods in countries where they are cheaper—thereby increasing demand (and hence prices for that good) in that country—and selling those goods in countries where the goods are more expensive, thereby increasing supply (and depressing prices for that good) in that country. In the context of a border adjustment in the United States, this type of international goods arbitrage is one channel that could lead to an appreciation of the dollar: as U.S. exports initially become cheaper relative to other goods in a foreign country as a result of the export subsidy, the increase in foreign demand for U.S. exports will lead to greater demand for dollars, and an appreciation of the dollar. Therefore, evidence on the validity of PPP may inform understanding of how long it takes for prices to adjust in response to a change in exchange rates.

Economists have found some evidence that, in the very long-run, real exchange rates (*i.e.*, nominal exchange rates adjusted for differences in national price levels) converge to PPP.<sup>146</sup> However, it takes considerable time for deviations of the real exchange rate from PPP to die out. Studies find that deviations of real exchange rates from PPP have half-lives of approximately

---

<sup>145</sup> See Linda Goldberg and Cedric Tille, “The Internationalization of the Dollar and Trade Balance Adjustment,” Federal Reserve Bank of New York Staff Reports, no. 255, August 2006.

<sup>146</sup> See Alan M. Taylor and Mark P. Taylor, “The Purchasing Power Parity Debate,” *Journal of Economic Perspectives*, vol. 18, no. 4, Fall 2004, pp. 135-158; and Kenneth P. Rogoff, “The Purchasing Power Parity Puzzle,” *Journal of Economic Literature*, vol. 34, no. 2, June 1996, pp. 647-668.

three to nine years.<sup>147</sup> That is, it takes three to nine years from the time of the initial deviation for half the deviation to dissipate. These results suggest that it may take a considerable amount of time for changes in exchange rates to be reflected in the relative price of goods across countries.

Explanations of deviations of real exchange rates from PPP generally focus on how businesses may price identical goods differently across countries, even if they are produced in the same location and have the same production costs, and how international markets are not as integrated as domestic markets, so that price dispersion for the same tradable good across countries is significantly greater than price dispersion within countries (even after accounting for differences in transportation and distribution costs).<sup>148</sup> There is generally little or no price dispersion across countries for goods whose prices are determined on global markets, such as commodities, so that exchange rate changes generally do not lead to price dispersion for commodities.

### Fiscal devaluations

Some commentators have noted that, taken as a whole, the business tax provisions in the Blueprint are, in very general terms, economically similar—but not necessarily equivalent as potentially implemented—to a policy that pairs the introduction of a broad-based, uniform VAT with a payroll tax reduction of the same proportion.<sup>149</sup> Such a policy has been examined in the economics literature on “fiscal devaluations,” which refer to the fiscal policies a country can implement to achieve the same economic effect as an exchange rate devaluation.<sup>150</sup> The recent literature has examined conditions under which countries with fixed exchange rates can potentially replicate the trade effects of an exchange rate devaluation—and, in particular, raise

---

<sup>147</sup> Ariel Burstein and Gita Gopinath, “International Prices and Exchange Rates,” in Gita Gopinath, Elhanan Helpman, and Kenneth Rogoff (eds.), *Handbook of International Economics*, vol. 4, Elsevier, pp. 391-451. An earlier survey reported a “consensus” half-life estimate of three to five years. See Kenneth P. Rogoff, “The Purchasing Power Parity Puzzle,” *Journal of Economic Literature*, vol. 34, no. 2, June 1996, pp. 647-668. There is considerable uncertainty surrounding estimates of PPP half-lives. See Barbara Rossi, “Confidence Intervals for Half-Life Deviations from Purchasing Power Parity,” *Journal of Business and Economic Statistics*, vol. 23, no. 4, October 2005, pp. 432-442.

<sup>148</sup> See Andrew Atkeson and Ariel Burstein, “Pricing-to-Market, Trade Costs, and International Relative Prices,” *American Economic Review*, vol. 98, no. 5, December 2008, pp. 1998-2031; Doireann Fitzgerald and Stefanie Haller, “Pricing-to-Market: Evidence from Plant-Level Prices,” *Review of Economic Studies*, vol. 81, no. 2, pp. 761-786; and Gita Gopinath, Pierre-Olivier Gourinchas, Chang-Tai Hsieh, and Nicholas Li, “International Prices, Costs, and Markup Differences,” *American Economic Review*, vol. 101, no. 6, October 2011, pp. 2450-2486. One study has found evidence of limited price dispersion for identical goods within currency unions (in particular, the Eurozone). See Alberto Cavallo, Brent Neiman, and Roberto Rigobon, “Currency Unions, Product Introductions, and the Real Exchange Rate,” *Quarterly Journal of Economics*, vol. 129, no. 2, May 2014, pp. 529-595.

<sup>149</sup> See Alan Auerbach, Michael P. Devereux, Michael Keen, and John Vella, “Destination-Based Cash Flow Taxation,” Oxford University Centre for Business Taxation, working paper 17/01, January 2017, p. 2.

<sup>150</sup> A theoretical discussion of fiscal devaluations can be found in Emmanuel Farhi, Gita Gopinath, and Oleg Itskhoki, “Fiscal Devaluations,” *Review of Economic Studies*, vol. 81, no. 2, April 2014, pp. 725-760.

net exports—by increasing VATs (which do not affect exporters but raise the cost of imports from foreign firms) and decreasing payroll taxes (which reduce costs for domestic firms, including exporters, but have no effect on foreign firms).<sup>151</sup>

Although empirical work on fiscal devaluations is limited, and VATs are generally not broad-based and uniform, one study examining OECD countries from 1965 to 2009 finds some evidence that a revenue-neutral fiscal devaluation that combines an increase in VATs with a reduction in payroll taxes results in a short-run, but no long-run, increase in net exports for countries within the Eurozone (*i.e.*, the group of countries in the European Union that uses the euro as a national currency), but no short- or long-run change in net exports for countries outside the Eurozone.<sup>152</sup> While the authors point out that their study suffers from some important methodological limitations, they interpret their analysis as suggesting that fiscal devaluations may increase net exports, but only in the short run, for countries with fixed exchange rates (such as those in the Eurozone), but may have no effect, either in the short- nor long-run, on net exports for countries with flexible exchange rates (such as the United States).<sup>153</sup> In the context of the Blueprint, this study may inform understanding of the trade effects of the Blueprint as a whole, but it does not speak specifically to the isolated economic effects of the border adjustment component of the Blueprint.

---

<sup>151</sup> *Ibid.* The effectiveness of a fiscal devaluation typically requires rigidity in both the exchange rate (*i.e.*, a fixed exchange rate) and nominal wages. In countries with flexible exchange rates, fiscal devaluations would be less effective because the increased demand for exports and reduced demand for imports that initially results from the change in fiscal policy would be offset by appreciation of a country’s currency.

<sup>152</sup> Ruud de Mooij and Michael Keen, “Fiscal Devaluation” and Fiscal Consolidation,” in Alberto Alesina and Francesco Giavazzi (eds.), *Fiscal Policy after the Financial Crisis*, University of Chicago Press, 2013, pp. 443-485. The “short-run” referred to in this discussion is approximately a year or less—the estimated effects of one-year lagged changes in VATs or payroll taxes in the study are generally insignificant in a statistical sense—and the United States is excluded from the analysis because it does not have a VAT. The effect of fiscal devaluations on net exports is driven by the effect of lower payroll taxes on net exports. VAT reductions generally have a statistically insignificant effect on net exports.

<sup>153</sup> The authors note that disentangling the effect of fiscal policy on net exports from factors that affect both (such as unobserved differences across countries, change in economic conditions, and changes in policy) “is a pervasive and well-known problem in macro regressions of the kind explored here, calling for great caution in interpreting causality.” *Ibid.*, p. 455.