Testimony of
Wallace C. Turbeville on Behalf of Americans for Financial Reform

The Committee on Financial Services of the United States House of Representatives
Subcommittee on Capital Markets and Government Sponsored Enterprises
Subcommittee on Financial Institutions and Consumer Credit

----------

Hearing on “Examining the Impact of the Volcker Rule on Markets, Businesses, Investors and Job Creation”

January 18, 2012

Chairman Garrett, Chairman Capito, Chairman Renacci, Ranking Member Waters, Ranking Member Maloney and Members of the Subcommittees, good morning and thank you for the opportunity to provide testimony on the centrally important Volcker Rule.

For me, today’s hearing evokes memories of a time 33 years ago when, as a young attorney, I was commissioned to write testimony for a partner of Goldman Sachs to be delivered to a committee of Congress on behalf of the Securities Industry Association, one of the predecessors of SIFMA that represented the interests of investment banks. The goal of the testimony was to resist the repeal of Glass-Steagall, and so to protect investment banks from competition fueled by the massive cheap capital of the commercial banks.

After seven years as a lawyer specializing in public and private securities offerings, I was an investment banker at Goldman Sachs for more than a decade and then managed a small advisory firm. I also served as CEO of a firm providing counterparty credit management services in the derivatives markets. For the last two years, I have focused my efforts on financial system reforms, most recently working at a non-profit organization, Better Markets, during the period of proposed rulemaking on derivatives markets, participating in dozens of formal comments and various roundtable discussions. Today, I speak on behalf of Americans for Financial Reform, a coalition of more than 250 organizations who have come together to advocate for reform of the financial sector.

Circumstances are different today, but some fundamental principles remain the same. Trading requires sophisticated IT and quick witted and quantitatively gifted employees. But these can be bought and hired. The engine that generates trading businesses is capital, the cheaper the better in terms of competitive advantages.
Today’s hearing focuses on implementation of the Volcker Rule that prohibits institutions that enjoy the benefits of a federal safety net from engaging in the risky businesses of proprietary trading and hedge fund sponsorship and ownership. The notion is that the safety net and sheer size of the consequence of a default practically will compel another taxpayer bailout should this risky behavior lead to failure. The way chosen by Congress to avoid this result is to prohibit institutions that benefit from the safety net from engaging in the behavior. Proprietary trading is not made illegal. Trading demand can and, under the Volcker Rule will be, met by other institutions and market participants, but not the taxpayer-protected banks.

Congress approved section 619 of the Dodd-Frank Act to address massive risks taken by financial institutions subsequently bailed out by taxpayers. These failures led to the recession that festered to this day. Proprietary trading losses precipitated some $17 billion in investment losses around the globe.1 As Senators Merkley and Levin observed,

Trading revenues at the largest banks had increased from under fifteen percent of net operating revenues in 2004 to nearly thirty percent at the start of the crisis. However, the same trading exposures left the banks highly vulnerable, and in the fourth quarter of 2007 losses from trading almost entirely offset positive net operating revenues from all other sources combined, with trading losses equaling nearly 250 percent of net operating revenue, devastating the capital bases of many firms.

It is impossible to predict the triggering events for the next financial crisis. As experienced in 2007-08, the series of events will likely be complex. However, the Volcker Rule addresses the consequences of future disruptions. Proprietary trading and relations with hedge funds and private equity funds leaves banks exposed to the modern equivalent of a run on the banks, fueled by difficult-to-value complex positions subject to liquidity demands for margin and fragile financing through repurchase arrangements and securities lending. The concern is no longer depositor demands for their money. But liquidity demands to fund positions are an even greater threat.

Capital Allocation

These covered banks may well reduce their capital bases since it will not be needed to support the risks of proprietary trading of securities and derivatives. After all, the massive growth of their assets and the capital to hold them dates from about 1980 when they started a race to

compete with each other in the increasingly de-regulated trading markets.\(^2\) Like gamblers being staked to work the casino, the banks needed capital to get into the game. The safety net was intended to assure intermediation between savings and lending. As capital exploded in size, the too-big-to-fail consequence of the safety net grew to dwarf the original purpose for public involvement.

An overall capital reduction to a level that is both prudent and sized to meet the needs of a narrower business model is a good thing for the public. Every day until the Volcker Rule is implemented, the American people bear the risk associated with de facto guaranteeing these bloated capital bases. (This is compounded to the extent that capital continues to be sourced at imprudently high levels from short-term sources such as repos.) Any investment banker worth his or her salt would tell you that is a real but unrealized cost incurred by the public each day. In the financial crisis of 2008, the financial sector cashed the guarantee check and the public is now suffering the consequences. This will recur unless the guarantee no longer covers proprietary trading.

It is also a good thing because it will eliminate the distortion arising from the inflated amount of low-cost capital used by the banks to trade risk on their proprietary book. Bank capital is cheap because of the too-big–to-fail guarantee. Investors in banks require lower returns. In addition leverage, in all of its complex forms (many of which expose banks to cash liquidity risks), is readily available to the banks. Cheap and plentiful capital induces risk taking by traders who relish the “heads I win, tails you lose” marketplace. The rationalization is so obvious: no one will get hurt, only the government.

Where proprietary trading proves profitable and useful, this business will migrate out of government-guaranteed banks. The capital backing bank proprietary trading will not evaporate, but will be re-allocated to other institutions that will expand to provide the needed trading activity. The capital to support the expanding competitors might appear to be more expensive – but that is good news for the public since it will only appear to be more expensive if no one counts the costs borne by the public in the pre-Volcker Rule, too-big-to-fail model.

Moreover, with true free market capital engaged in proprietary trading, the trading activity will be more disciplined because the actual, legitimate costs of the capital needed to trade will be reflected. Perhaps some transaction types will not be available. But, if that is a function of the unavailability of cheap capital (subsidized by the public) that induces financially unsound trades, it is a good thing.

From the banks’ perspective (but not the economy’s), the capital will seem to evaporate along with the opportunity to trade risk using it. Perhaps that is why their comments, and more surprisingly the analysis of their experts, are all founded on the irrational assumption that, once

bank proprietary trading ceases under the Volcker Rule, others will not expand to meet demand. It is specious to the point of misleading to suggest that the needs for liquidity currently provided by banks will not be filled.

For example, the last-listed assumption in the recently published Oliver Wyman study\(^3\) is “We do not directly analyze a wide range of potential knock-on effects, including… [t]he potential replacement of some proportion of intermediation currently provided by Volcker-affected dealers by dealers not so affected.” This is hardly a “knock-on” effect. Rather, “replacement” is central to any study that honestly aims to explore the impact of the Volcker Rule. One imagines that this assumption was included at the end of the “Purpose and Scope of Analysis” chart in hope that it would go unnoticed.\(^4\)

\textit{Buy-side Perspective}

Many on the buy-side fall into a similar logic trap. Large market participants, such as mutual funds, can direct massive flows of trading activity to banks and commonly take advantage of this market power. For such prized customers, the banks will take on large, block trades on favorable terms, since the banks have the capital base to take on such risk. In effect, the customer is renting the balance sheet of the bank, and the rent reflects both the favored customer position and the low-cost, subsidized capital of the federally guaranteed institution. In the post-Volcker Rule environment a given block trade may have to be transacted in smaller units. This is because the non-bank institution will be more sensitive to risk, and because the capital charge will reflect reality, not public subsidy.

It is not a surprise that certain buy-side customers like the current setup. They are indirectly benefiting from a public subsidy, after all. But the public is no longer satisfied with that trade and the Volcker Rule will reverse it.

Furthermore, Sections 619 and 621 of the Dodd-Frank Act put an end to conflicts of interest between banks and other dealers and their customers. This will be a great benefit to the buy-side.

Indeed, the buy-side has recognized the harm to their bottom line posed by proprietary traders trading against them. In its 2009 report on financial reform, the Council of Institutional Investors (“CII”) prominently highlighted the need to address proprietary trading, noting that "Proprietary trading creates potentially hazardous exposures and conflicts of interest, especially

\(^3\) Oliver Wyman, “The Volcker Rule restrictions on proprietary trading – Implications for the US corporate bond market,” December 2011, study conducted for SIFMA (the “Oliver Wyman Study”).

\(^4\) Note that a review of the Oliver Wyman Study raises many questions as to its reliability as a measure of cost, only some of which are discussed herein.
at institutions that operate with explicit or implicit government guarantees. Ultimately, banks should focus on their primary purposes, taking deposits and making loans. As one member of the CII Investors’ Working Group panel explained it, proprietary trading has significantly harmed the institutional investors:

Proprietary trading by banks has become by degrees over recent years an egregious conflict of interest with their clients. Most if not all banks that prop trade now gather information from their institutional clients and exploit it. In complete contrast, 30 years ago, Goldman Sachs, for example, would never, ever have traded against its clients. How quaint that scrupulousness now seems. Indeed, from, say, 1935 to 1980, any banker who suggested such behavior would have been fired as both unprincipled and a threat to the partners’ money.

Furthermore, the bipartisan Levin-Coburn Report by the Senate Permanent Subcommittee on Investigations offers a detailed description of some of the conflicts of interest that directly cost investors billions of dollars.

**Complexity of the Proposed Rules**

The Proposed Rules are long and complicated, but the reason is not the desire of regulators to burden the banks with rules. Section 619 of the Dodd-Frank Act surgically excises only those elements of trading that pose the greatest risks, allowing banks to continue activities such as market making, underwriting and restrained participation in hedge funds and private equity funds. The intent was to limit bank activities as little as possible.

However, the banks themselves had allowed the proprietary trading fever to infect the client-oriented businesses that the Volcker Rule seeks to exclude. For instance, desks engaged in client-oriented market making could never hope to generate revenues to match their colleagues on desks explicitly dedicated to prop trading. As a result, market-making desks migrated into prop trading by seeking client business that justified the accumulation of huge positions that they

---


called “inventory” using logic that is best described as Orwellian. There is no better illustration than the recent Oliver Wyman study that describes inventory levels at 4.6 times average daily volume for less liquid products. The conclusion is inescapable: this is not making a market by any conventional meaning of the concept; it is proprietary trading using a more benign name.

As a result, to preserve certain activities that are less risky, client oriented businesses, the regulators were compelled to define and describe them using legitimate, non-Orwellian rules and monitoring regimes.

Moreover, many of the complexities of the Volcker Rule stem from endless entreaties of financial institutions, which met with the regulatory agencies some 350 times. Having prevailed with the insertion of numerous exceptions and permissions, it is ironic that banks now complain about the complexity that is an inescapable consequence.

**Liquidity Issues**

The forecasting of liquidity post Volcker Rule implementation and measurement of its consequences in terms of liquidity premia and bid/ask spreads is analytically difficult. Many factors intervene. For instance, liquidity is related to credit spreads (the interest rate impact of the credit quality of the issuer of debt) in complicated ways. Conditions in the financial markets can affect the appetite for higher yielding, lower credit quality debt. When there is great confidence in the economy and interest rates are generally low, investor appetite for the yields generated by relatively lower credit quality will be higher. As a result, liquidity is relatively higher for this debt. In contrast, when the economic outlook is weak and financial markets are more concerned about failures, relative liquidity is lower for this debt. This represents a “flight to quality.”

**Oliver Wyman Approach.** The recently published Oliver Wyman study relies on a prior study entitled “Corporate bond liquidity before and after the onset of the subprime crisis.” The purpose of this study was to examine the effects of the crisis on liquidity premia. One thing is for certain: extrapolation of liquidity premia based on data from the most stressed economic and financial conditions in modern times to forecast liquidity costs is a bad idea. The forces affecting liquidity costs distort relationships in the extreme.

As a result of using this study to estimate the premium for lower liquidity, the flaws in the assumptions for the amount of reduced liquidity (i.e., no replacement for bank liquidity from other sources was assumed) were compounded by application of cost factor derived from distorted, extraordinarily stressed conditions. The Oliver Wyman Study obtains the result it

---

8 Oliver Wyman Study, page 9.
10 To calculate the cost of power liquidity, the Oliver Wyman Study used values calculated by Dick-Neilson,
seeks because it has assumed the result as the starting point.

In addition, the overall approach misses a critically important point. Higher liquidity premia have a self-correcting effect. Liquidity premia are related to bid/ask spreads. When liquidity is low, the spreads will be high because liquidity providers will require greater compensation for the service they provide. (I will buy your bond, but only if my expected compensation is relatively high, since there is greater risk of re-selling it because of low liquidity.) As bid/ask spreads increase because of lower liquidity, more capital will be attracted to the market to take advantage of the profit potential. This, in turn, moderates bid/ask spreads and liquidity premia until equilibrium is achieved.

It is remarkable that the financial services industry puts forth arguments that simply ignore the laws of supply and demand as they apply to capital.

**Volume vs. Liquidity.** Much of the analysis and comment is based on confusion between volume and liquidity. Trading activity that provides liquidity, in particular market making, provides real value to the economy. Other activity generates volume, but the value is less clear, to say the least. In fact, this activity may impose a drag on the economy. Recent academic studies indicate that

- dealer activity is overwhelmingly weighted toward trading that does not provide liquidity;

- activity that represents the greatest volume increases the costs of accessing liquidity; and

- the layers of intermediation that have arisen from trading practices other than market making, while efficiently executed to generate profits for traders, involve costs to the rest of the economy that result in an inefficient financial system for the economy as a whole.

As a result, the assertions of economic cost of the Volcker Rule are extremely questionable, and the better analysis is that the real economy will be benefitted. These studies are reviewed below.

A study by professors at MIT’s Sloan School of Management examines this issue in the context of modern market behavior. The Wang Study focuses on a phenomenon illustrated most graphically by the Flash Crash. While trading volumes may be extremely high, dealer trading does not appear to be providing market making since it does not work to provide liquidity to investors so as to provide stable and efficient pricing. Key points of observation are times of market stress.

---

Feldhutter and Lando. Oliver Wyman describes how they selected the particular cost percentages for their study: “DFL construct two independent ‘panels’ of bond liquidity data – one for the Q3 2005-Q2 2007 period, one for the Q3 2007-Q2 2009 period – using TRACE data. The most recently available panel is used in our analysis; the earlier period shows smaller, but still significant effects.”

Not only is the social function of liquidity provision most important to other market participants during these periods, it is also during these periods (when prices have likely diverged from fundamentals) during which expected profits from providing liquidity should theoretically be the highest. Therefore, if market makers are providing liquidity by accommodating order imbalances, we should observe greater dealer trade activity during periods of higher volatility and kurtosis.\textsuperscript{12}

The Wang Study finds that such greater activity does not occur at these times. Further, the study finds substantial evidence that trading activity is largely based on information and designed to profit from short-term price movements. “We have shown that dealers do not provide liquidity to the market; instead, they trade on information.”\textsuperscript{13}

In contrast with the Oliver Wyman Study, a better analysis of the Volcker Rule is that the effects on liquidity will largely center on the unavailability of subsidized capital chasing transactions that would not make sense but for the subsidy. Capital raised by short-term leverage (which is so dangerous to the markets) may also recede as lenders can no longer depend on a too-big-to-fail bailout. It can also be anticipated that high frequency, algorithmic trading activity will moderate as more demanding and socially useful rationales for capital deployment are imposed.

Liquidity may be affected, though the Oliver Wyman Study provides little guidance on how. But the best analysis is that the effects will be, on the whole, healthy for the economy and the public. A recent study by Thomas Philippon of New York University’s Stern School of Business undertakes a quantitative analysis of the economy-wide cost of financial intermediation over the last century through the device of a “finance cost index.”\textsuperscript{14} The Philippon Study concludes that, historically, the cost of intermediation has been remarkably stable. However, the further conclusion is particularly relevant to the liquidity discussion:

\begin{quote}
[T]he finance cost index has been trending upward, especially since the 1970s. This is counter-intuitive. If anything, the technological development of the past 40 years (IT in particular) should have disproportionately increased efficiency in the finance industry. How is it possible for today’s finance industry not to be significantly more efficient than the finance industry of John Pierpont Morgan? I conclude from Figure 11 [i.e., the historic trends] that there is a puzzle.\textsuperscript{15}
\end{quote}

At least a part of the answer to this puzzle may well be the inefficient deployment of bank capital to layers of uneconomic intermediation as banks seek higher returns from the spreads between.

\begin{itemize}
  \item [15] Phillipon Study, pages 16-17.
\end{itemize}
cheap capital costs and exotic securities and derivatives. This is completely consistent with the answer suggested by Professor Philippon.

Finance has obviously benefited from the IT revolution and this has certainly lowered the cost of retail finance. Yet, even accounting for all the financial assets created in the US, the cost of intermediation appears to have increased. So why is the non-financial sector transferring so much income to the financial sector? Mechanically, the reason is an enormous increase in trading.\textsuperscript{16}

The layers of socially unproductive intermediation are best illustrated by the algorithmic trading that dominates today’s market volume. In fact, it is clear that the dominance of algorithmically driven trading using techniques associated with high frequency trading does not provide liquidity. Rather, it consumes liquidity with adverse consequences. A recent study of these issues draws conclusions that are summarized as follows:

We analyze the impact of high frequency trading in financial markets based on a model with three types of traders: liquidity traders (LTs), professional traders (PTs), and high frequency traders (HFTs). Our four main findings are: i) The price impact of liquidity trades is higher in the presence of the HFTs and is increasing with the size of the trade. In particular, we show that HFTs reduce (increase) the prices that LTs receive when selling (buying) their equity holdings. ii) Although PTs lose revenue in every trade intermediated by HFTs, they are compensated with a higher liquidity discount in the market price. iii) HF trading increases the microstructure noise of prices. iv) The volume of trades increases as the HFTs intermediate trades between the LTs and PTs. This additional volume is a consequence of trades which are carefully tailored for surplus extraction and are neither driven by fundamentals nor is it noise trading. In equilibrium, HF trading and PTs coexist as competition drives down the profits for new HFTs while the presence of HFTs does not drive out traditional PTs.\textsuperscript{17}

Thus, algorithmic and high frequency trading actually extracts value by intermediating between liquidity providers (market makers) and liquidity traders (large scale investors) and extracts value so as to widen spreads. This volume, in part targeted by the Volcker Rule, does not provide liquidity; it exploits the liquidity process at a cost to the investors.

The consequences to the shape of the American economy are potentially dramatic. Professor

\textsuperscript{16} Phillippon Study, page 22.
Philippon eloquently poses this issue as follows: “the finance industry that sustained the expansion of railroads, steel and chemical industries, and the electricity and automobile revolutions was more efficient than the current finance industry.”

Sovereign Debt

There has been a significant amount of discussion related to sovereign debt. It is important to note that there is no prohibition of underwriting or making a market in sovereign debt. And sovereign debt can be held by banks, but not in trading accounts. One class of market participant, covered banks, is not permitted to engage in proprietary trading of foreign sovereign bonds.

The rationale behind this could not be better illustrated than the recent events relating to MF Global. The firm failed because of a bet on sovereign debt that was focused on issues of political will as much as quantitative analysis of credit quality.

Inevitably, sovereign credits are difficult to assess and are subject to political factors that defy quantitative analytics. This is clear from the rationale expressed by credit rating agencies relating to the downgrade of US debt and the downgrade of various European sovereign credits. Liquidity cannot be reliably assumed.

The Proposed Rules

The regulatory agencies have proposed rules implementing portions of Section 619 of the Dodd-Frank Act. Generally, the Proposed Rules address the principles laid out by the Volcker Rule. However, significant changes are needed if the intent of Congress is to be fulfilled.

The Proposed Rules do not fully implement the statutory provisions in certain critical aspects. Section 619 recognizes that the purpose of the Volcker Rule cannot be achieved unless the activities of systemically important non-bank financial entities are addressed harmoniously with the prohibitions imposed on banks.

Any nonbank financial company supervised by the Board that engages in proprietary trading or takes or retains any equity, partnership, or other ownership interest in or sponsors a hedge fund or a private equity fund shall be subject, by rule, as provided in subsection (b)(2), to additional capital requirements for and additional quantitative limits with regards to such proprietary trading and taking or retaining any equity, partnership, or other ownership interest in or sponsorship of a hedge fund or a private equity fund., as if the nonbank financial company supervised by the Board were a banking entity. [Emphasis added.]

Philippon Study, page 2.
This provision wisely recognizes the interconnectedness of systemically important non-bank financial entities with the banking system. Prohibition of bank activities is, by itself, insufficient. Prohibitions may well induce some institutions to change their regulatory categorizations. They are also likely to increase proprietary trading activity by non-banks. Protection from the migration of this risk back into the banking system through points of interconnectedness is needed. The implementing rules should address this factor so that it is harmonized with the direct prohibitions.

Further guidance is needed regarding the general, overriding prohibition of exposures to high-risk assets and trading strategies and activities that could pose a threat to the financial stability of the United States. These overriding limitations were intended to affect behavior and clarity is needed if they are to have a practical impact. The failure to provide such clarity suggests that they can be ignored.

Implementing provisions for a third overriding limitation related to conflicts of interest must also be refined. Disclosure is too often allowed to substitute for substantive prohibition. The legislative history makes clear that disclosure cannot be adequate for certain conflicts and this must be reflected in the rules. Furthermore, information barriers, which are also permitted as avenues to satisfy the conflicts prohibition, are ineffective for many kinds of conflicts of interest. Structural remedies for conflicts such as information barriers can easily morph into safe harbors that give license to behavior that Congress sought to limit.

The Proposed Rules address the permitted activities of market making, underwriting and risk-mitigating hedging in great detail. These provisions suffer from overly broad and loose definitions. The financial services industry has sought to stretch the meaning of the terms beyond rationality. To an extent, the regulatory agencies have succumbed to this tactic. The Proposed Rules establish sensible principles in a number of places, and then proceed to struggle with fitting real-world activities based on the tactical semantics that fill industry comments into the obviously sound set of principles. Several important points must be reflected in the rules:

- Market making is a customer service in which a financial institution serves client needs to access markets by offering two-sided buy and sell prices. In normal conditions, the financial institution is compensated for facilitating access by realizing the spread between the prices. This is simply not a service that can be provided in respect of securities and derivatives for which there is no discernable two-sided market.

- Underwriting is a service to a client that seeks to issue securities in a public offering. The financial institution is allowed a discount in price from the reasonably forecasted price at which the offering will clear the market. If this price cannot be reasonably forecasted, the concept of the client service in exchange for a price discount does not make sense.

- Risk-mitigating hedging is an exception that flows from an underlying permitted activity. It is important for the regulatory agencies to address the inescapable truth that it is in the interest of market participants that seek to limit the restrictions on their activities to denote trading strategies that result in proprietary risks as “hedging.” The rules must adhere to a straightforward concept. A transaction that embeds market price risk different from the permitted exposure that is purported to be hedged constitutes, at least
in part, a proprietary risk position notwithstanding rationalizations and technical semantics.

The Proposed Rules also provide categorical exceptions that can easily evolve into dangerous loopholes. Activities like repurchase agreements, securities lending and liquidity management can have important and essential benefits. They can also be used as vehicles for dangerous risk taking in proprietary positions. Categorical exceptions must be excluded and the rules must rely, instead, on the purposes behind these activities.

Finally, the restrictions on hedge fund and private equity fund activity must be tightened. In particular, the breadth of permissible activity related to asset-backed securities that fall within the hedge fund definition must be aligned with the intent to avoid unnecessary restrictions on the legitimate need to securitize loans and similar assets. The rules must not go beyond this intent.

There are a number of other improvements of the Proposed Rules that are needed. This is inevitable given the breadth of the Volcker Rule and the many provisions designed to accommodate the perceived needs of industry. However, the overwhelmingly important fact is that the basic principles reflected in Section 619 of the Dodd-Frank Act and in the effort of the regulatory agencies to implement it are a critically important step toward protecting the American economy from the devastations of another financial crisis.

Thank you for the opportunity to present my views.
United States House of Representatives
Committee on Financial Services

“TRUTH IN TESTIMONY” DISCLOSURE FORM

Clause 2(g) of rule XI of the Rules of the House of Representatives and the Rules of the Committee on Financial Services require the disclosure of the following information. A copy of this form should be attached to your written testimony.

<table>
<thead>
<tr>
<th>1. Name:</th>
<th>2. Organization or organizations you are representing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wallace C. Turbeville</td>
<td>Americans for Financial Reform</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Business Address and telephone number:</th>
</tr>
</thead>
</table>

| 4. Have you received any Federal grants or contracts (including any subgrants and subcontracts) since October 1, 2008 related to the subject on which you have been invited to testify? |

☐ Yes ☒ No

| 5. Have any of the organizations you are representing received any Federal grants or contracts (including any subgrants and subcontracts) since October 1, 2008 related to the subject on which you have been invited to testify? |

☐ Yes ☒ No

| 6. If you answered yes to either item 4 or 5, please list the source and amount of each grant or contract, and indicate whether the recipient of such grant was you or the organization(s) you are representing. You may list additional grants or contracts on additional sheets. |

| 7. Signature: |

Wallace C. Turbeville 1/17/12

Please attach a copy of this form to your written testimony.