UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,	**Criminal No. 10-0096 (DLC)**
v.	**Honorable Denise L. Cote**
SERGEY ALEYNIKOV,	
Defendant.	

MEMORANDUM OF SENTENCING CONSIDERATIONS SUBMITTED
ON BEHALF OF DEFENDANT SERGEY ALEYNIKOV

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TABLE OF CONTENTS

TABLE OF AUTHORITIES

iii

PRELIMINARY STATEMENT

Defendant, Sergey Aleynikov ("Aleynikov"), who will come before the Court for sentencing on March 18, 2011, respectfully submits this memorandum of sentencing considerations in anticipation of that proceeding. In this sentencing memorandum, Aleynikov respectfully demonstrates that in the unique circumstances of this case, a sentence of probation is warranted.

The evidence at trial indisputably showed — and Aleynikov has admitted since the moment of his arrest — that he took computer source code from Goldman Sachs ("Goldman") that did not belong to him. Although Aleynikov maintained at trial, and continues to maintain, that he intended to use only portions of the downloaded code that were open source, the jury found that he copied Goldman's proprietary code with the intent to benefit himself or his new employer, Teza Technologies ("Teza"), and to injure Goldman. But in finding that Aleynikov intended to injure Goldman by copying its property, the jury did not find — and there was no evidence — that Aleynikov intended to cause <u>pecuniary</u> harm to Goldman, the finding needed to warrant increasing his base offense level to reflect actual or intended loss under the Federal Sentencing Guidelines. Rather, the jury obviously credited the Government's claim that Aleynikov stole portions of Goldman's high frequency trading platform to make it easier for him to write the computer code to be used in such a platform at Teza. Although the Government initially argued that Aleynikov had stolen Goldman's entire trading platform and could use it to compete with Goldman, the Government abandoned that theory before the Indictment was returned, and repudiated it consistently thereafter. Thus, the jury heard neither evidence nor argument that Aleynikov had stolen Goldman's entire high frequency trading platform and sold or attempted to sell it to a Goldman competitor. To the contrary, the evidence showed at most that Aleynikov intended to use the code he copied to make it easier for him to build a high

1

frequency platform at Teza — which, the evidence showed, had not even developed the trading strategy that platform would be used to execute. Nevertheless, the Government now seeks to have Aleynikov punished as though he had not only stolen Goldman's entire platform, as it originally claimed, but also had sold that platform to a Goldman competitor who used it to cause Goldman monetary damages of twenty million dollars.

That is simply not a fair reading of the jury's verdict. While the crimes for which Aleynikov was convicted are undoubtedly serious, he was not found to have caused or intended pecuniary harm to Goldman. As a result, he does not deserve the harsh sentence the Government requests — 97-120 months in prison. Such a sentence would radically overstate the criminality of his offense conduct. Under 18 U.S.C. § 3553(a), a sentence must be "sufficient, but not greater than necessary" to accomplish the legitimate goals of sentencing. There is certainly a need to deter the theft of trade secrets, which can cause tremendous pecuniary harm. But it is fundamentally unfair to deter those who might be inclined to inflict economic harm through trade secret theft by harshly punishing someone who, although found guilty of such theft, was not proven to have inflicted or intended such harm. Under the unique circumstances of this case, Aleynikov — who has suffered so much already as a result of his conduct — respectfully submits that a custodial sentence would be greater than necessary.

As explained in greater detail below, the Sentencing Guidelines calculation in this case supports a probationary sentence because there was no evidence of an actual or intended loss, and the only enhancement that is properly applicable is a two-level increase for abuse of a position of trust. With a base offense level of six, a criminal history category of I, and a two-level increase pursuant to USSG § 3B1.3, the total offense level should be eight, yielding a Guidelines sentencing range of zero to six months. Even were the Court to reject this Guidelines

analysis and instead credit the Government's Guidelines calculation and apply a twenty-level increase for intended loss and a two-level increase for sophisticated means, Aleynikov respectfully submits that the resulting Guidelines range would so overstate the criminality of his offense that the Court should decline to treat the guideline range as a significant factor in determining his sentence.

A review of the § 3553 factors beyond the Guidelines likewise supports a probationary sentence in this case. First, the nature and circumstances of the offense, and the history and characteristics of the defendant, separate this case from other theft of trade secret cases. This is not a case in which the defendant stole a trade secret and attempted to profit from it directly — either by attempting to sell it to a competitor or by negotiating a higher salary based on a promise of bringing the trade secret with him to a new employer. Rather, this is a case in which the Government's argument, which the jury apparently credited, was that Aleynikov took Goldman's trade secrets because he was afraid that he otherwise would not be able to meet the aggressive development deadlines imposed by his new boss, who implored his development team, "Let's move fast." The nature of Aleynikov's offense separates his from the normal case in which the defendant is driven by greed or the desire for personal pecuniary gain. With respect to Aleynikov's personal characteristics — as the many letters of support attached to this sentencing memorandum attest — he has and continues to be a kind and gentle man with a strong work ethic, widely respected in his community for his ability and inclination to help others and to be a good father to his daughters. Thus, the nature of Aleynikov's offense and his personal history and characteristics all counsel in favor of a probationary sentence.

Second, the grave consequences Aleynikov has already suffered as a result of his conduct and the significant press attention this case has received serve as a sufficient general deterrent by

informing the world that the United States Government is resolved to vigorously prosecute theft

of trade secrets. There can be no question that those same consequences, including the loss of

Aleynikov's job, the destruction of his reputation and the break-up of his family, are also more

than sufficient to specifically deter him from any such similar conduct in the future.

Third, the need to avoid unwarranted sentence disparities among defendants with similar

records who have been found guilty of similar conduct counsels in favor of a probationary

sentence in this case. Although there are few Economic Espionage Act ("EEA") convictions and

sentences to use as a point of comparison, consideration of the case of Samarth Agrawal, who

was sentenced in this courthouse to a 36-month term of imprisonment earlier this week after

having been convicted of stealing source code for a financial institution's high-frequency trading

system, leads to the conclusion that Aleynikov should receive probation. In Agrawal, the

defendant (i) stole source code specific to Société Générale's ("SocGen") high-frequency index-

arbitrage strategy; (ii) expressly planned, with principals of his new employer, to replicate

SocGen's strategy; and (iii) negotiated to be paid a percentage of the profits his new employer

would earn by implementing that strategy. Here, by contrast, the jury could have found at most

that Aleynikov took source code that would enable Teza to get its trading platform up and

running more quickly, at most by a matter of months. There was no evidence (i) that Teza

intended to employ a trading strategy that would compete with Goldman or that Aleynikov

would have been consulted regarding the strategy Teza would employ; (ii) that Aleynikov

attempted to sell the code to Teza or to negotiate a personal share of the profits Teza would earn

through use of such code; or (iii) that Aleynikov intended Teza to take any market share from

Goldman. If it was appropriate to give Agrawal a sentence of thirty-six months given the nature

of his EEA violation, then we respectfully submit that a sentence of probation for Aleynikov would serve the purpose of avoiding sentencing disparity in this case.

For the reasons set forth above and amplified below, Aleynikov respectfully submits that in light of the totality of the circumstances of this case, a sentence of probation is warranted.

STATEMENT OF FACTS AND PROCEDURAL HISTORY

On December 10, 2010, a jury convicted Aleynikov of stealing trade secrets — specifically, computer source code related to Goldman's high frequency trading system — in violation of the EEA, 18 U.S.C. § 1832, and of transporting that stolen source code across state lines in violation of the Interstate Transportation of Stolen Property Act (ITSPA), 18 U.S.C. § 2314.

On February 14, 2011, the United States Probation Department issued a preliminary Presentence Investigation Report (PSR) in advance of the sentencing hearing scheduled for March 18, 2011. Although it is the norm for a draft PSR to recommend a Total Offense Level to which the parties respond before the PSR is finalized, the draft PSR in this case did not do so. Instead, the draft PSR simply reported the parties' respective positions. If, as the Government urges, the loss amount were calculated between $7 and $20 million, Aleynikov's total offense level would be 30, yielding a sentencing range of 97-121 months. (PSR ¶ 112.) If, as the defense urges, the loss amount were zero, the draft PSR stated, the total offense level would be 14, and the sentencing range would be between 15 and 21 months. (Id.) Under both scenarios, the draft PSR included an increase to the base offense level for sophisticated means, pursuant to USSG § 2B1.1(b)(9)(C), and an increase for abuse of a position of trust, pursuant to USSG § 3B1.3. (Id. ¶¶ 52, 54, 62, 64.) Aleynikov objected to application of a sophisticated means enhancement, but did not challenge the application of the abuse of position of trust enhancement. As of the date of this submission, the Probation Department has not recommended a specific loss

amount and has not ruled on Aleynikov's objection to the sophisticated means enhancement. The draft PSR reflects the Probation Department's view, to which the Government did not object, that the offense conduct did not involve any actual loss to Goldman and, therefore, that no restitution should be ordered. (Id. ¶ 122.)

LEGAL ARGUMENT

I.   UNDER THE SENTENCING FACTORS OF 18 U.S.C. § 3553(A), THE COURT SHOULD IMPOSE A NON-CUSTODIAL SENTENCE.

Although calculating the applicable Sentencing Guidelines range remains a component of the sentencing process in every case, that analysis does not end the inquiry under the current state of the law. To the contrary, the applicable Guidelines range is now just one of many factors the sentencing court must consider when using its broad discretion to impose a sentence. In United States v. Booker, 543 U.S. 220 (2005), the Supreme Court dramatically changed the sentencing landscape by severing those portions of the federal sentencing statutes making the Guidelines mandatory. Id. at 245. Thus, the Guidelines are now "advisory rather than mandatory," as the Second Circuit recently affirmed. United States v. Carr, 557 F.3d 93, 98 (2d Cir. 2009).

Although the Guidelines are merely advisory, they still retain an important role in a district court's sentencing decision. United States v. Thomas, 628 F.3d 64, 67 (2d Cir. 2010). District courts are to treat the applicable Guidelines range "'as a benchmark or point of reference or departure' for the imposition of sentences following Booker." United States v. Ministro-Tapia, 470 F.3d 137, 142 (2d Cir. 2006) (quoting United States v. Fernandez, 443 F.3d 19, 28 (2d Cir. 2006) (quotation marks omitted)). Thus, a district court should begin a sentencing proceeding by calculating, with the assistance of the PSR, the applicable Guidelines range. Thomas, 628 F.3d at 67. After doing so and after considering all other relevant factors, the court

should then determine an appropriate sentence, which may or may not be within the Guidelines range. Id.

Following Booker, "a district court has broad latitude to impose either a Guidelines sentence or a non-Guidelines sentence." United States v. Rigas, 583 F.3d 108, 114 (2d Cir. 2009) (quotation marks omitted). In arriving at either type of sentence, the district court must consider, inter alia, the factors set forth in 18 U.S.C. § 3553(a). United States v. Sanchez, 517 F.3d 651, 660 (2d Cir. 2008). Ultimately, the sentence must be reasonable. Carr, 557 F.3d at 107. Reasonableness has both a procedural and a substantive component. Id. A district court commits procedural error if it fails to calculate the Guidelines range, treats the Guidelines as mandatory, fails to consider the § 3553(a) factors, selects a sentence based on clearly erroneous facts or fails to adequately explain the chosen sentence. Id. Substantive reasonableness requires that the length of the sentence be reasonable in light of the factors outlined in § 3353(a). Sanchez, 517 F.3d at 660-61.

Those § 3553(a) factors include — in addition to the applicable Guidelines range — "the nature and circumstances of the offense and the history and characteristics of the defendant," 18 U.S.C. § 3553(a)(1); "the need to avoid unwarranted sentence disparities among defendants with similar records who have been found guilty of similar conduct," id., § 3553(a)(6); and "the need to provide restitution to any victims of the offense," id., § 3553(a)(7). Courts must also consider the purposes intended to be served by criminal sentences, which are as follows:

> (A) to reflect the seriousness of the offense, to promote respect for the law, and to provide just punishment for the offense; (B) to afford adequate deterrence to criminal conduct; (C) to protect the public from further crimes of the defendant; and (D) to provide the defendant with needed educational or vocational training, medical care, or other correctional treatment in the most effective manner.

18 U.S.C. § 3553 (a)(2). In Kimbrough v. United States, 552 U.S. 85, 101 (2007), the Supreme

Court explained that § 3553(a) contains "an overarching provision" instructing district courts to

'impose a sentence sufficient, but not greater than necessary' to accomplish the goals of

sentencing," which are set forth in § 3553(a)(2). Id. (quoting 18 U.S.C. § 3553(a)).

In Gall v. United States, 552 U.S. 38 (2007), the Supreme Court elaborated on the

interplay between the Sentencing Guidelines and the § 3553(a) factors and articulated the

resulting procedure for sentencing. The Court explained that, as a first step, "a district court

should begin all sentencing proceedings by correctly calculating the applicable Guidelines

range." Id. at 49. The Court counseled, however, that the Guidelines are merely "the starting

point and the initial benchmark." Id.   Thus, the Court continued, "after giving both parties an

opportunity to argue for whatever sentence they deem appropriate, the district judge should then

consider all of the § 3553(a) factors to determine whether they support the sentence requested by

a party." Id. The Supreme Court explained the sentencing court's tasks during that second stage

as follows:

> [the sentencing judge] must make an individualized assessment
> based on the facts presented. If he decides that an outside-
> Guidelines sentence is warranted, he must consider the extent of
> the deviation and ensure that the justification is sufficiently
> compelling to support the degree of the variance.

Id. at 50 (citing Rita v. United States, 551 U.S. 338 (2007)). In this post-Booker sentencing

framework, sentencing judges "may exercise greater discretion than they could have exercised

under the pre-Booker regime." United States v. Martinez, 413 F.3d 239, 243 (2d Cir. 2005).

In Gall and Kimbrough, the Supreme Court underscored the breadth of the discretion to

be exercised by the sentencing court and the importance of the § 3553(a) factors to that exercise

of discretion. In Gall, the district court imposed a sentence of straight probation despite the pre-

sentence report's recommended sentencing range of 30 to 37 months. 552 U.S. at 43-44.

Considering the nature and circumstances of the offense and the history and characteristics of the defendant, the district court held that a probationary term was sufficient but not greater than necessary to serve the purposes of sentencing. Id. at 45. The Eighth Circuit reversed, holding that the district court had violated the rule that "a sentence outside of the Guidelines range must be supported by a justification that 'is proportional to the extent of the difference between the advisory range and the sentence imposed.'" Id..

The Supreme Court reversed the Eighth Circuit's ruling and reinstated the district court's probationary sentence, holding that a "rule requiring 'proportional' justifications for departures from the Guidelines range is not consistent with" Booker. Id. at 45-46. The Court specifically rejected (1) any rule "that requires 'extraordinary circumstances' to justify a sentence outside the Guidelines range;" and (2) "the use of a mathematical formula that uses the percentage of a departure as the standard for determining the strength of the justifications required for a specific sentence." Id. at 47. The Court explained that the exceptional-circumstances standard and the mathematical-formulation test are inconsistent with Booker because they "reflect a practice — common among courts that have adopted 'proportional review' — of applying a heightened standard of review to sentences outside the Guideline range." Id. at 49. The Court elaborated that the same standard of review — abuse of discretion — applies to all sentences "whether inside or outside the Guidelines range." Id.

Summarizing the practical import of the post-Booker sentencing mechanism, the Gall Court commented that "the Guidelines are not mandatory, and thus, the 'range of choice dictated by the facts of the case' is significantly broader." Id. at 59. The Court's reasoning in Kimbrough, a companion case argued with Gall and decided the same day, was to similar effect. In Kimbrough, the Court held that "[t]he judge may determine . . . that, in the particular case, a

9

within-Guidelines sentence is 'greater than necessary' to serve the objectives of sentencing."
Kimbrough, 552 U.S. at 91..

In Gall, the Supreme Court concluded that if a district court properly follows the procedure set forth above, the sentence it imposes should be given deference, even if it is below the applicable Guidelines range. In that regard, the Court explained that, "[a]fter settling on the appropriate sentence, [the sentencing court] must adequately explain the chosen sentence to allow for meaningful appellate review and to promote the perception of fair sentencing." Gall, 552 U.S. at 50. On appellate review, if it is determined that the district court committed no procedural error (such as erroneously calculating the range), the appellate court "must give due deference to the district court's decision that the § 3553(a) factors, on a whole, justify the extent of the variance." Id. In keeping with this holding, the Second Circuit does "not presume that a Guidelines range sentence is reasonable." United States v. Preacely, 628 F.3d 72, 79 (2d Cir. 2010); see also Fernandez, 443 F.3d at 27 (declining "to establish any presumption, rebuttable or otherwise, that a Guidelines sentence is reasonable").

After Booker, a district court imposing sentence has a duty to consider all of the § 3553(a) factors, of which the applicable Guidelines range is but one. Preacely, 628 F.3d at 78. Although sentencing courts have considerably more discretion after Booker, they cannot import their own philosophy of sentencing if it is inconsistent with one of the § 3553(a) factors. United States v. Wills, 476 F.3d 103, 107 (2d Cir. 2007). As a result, the sentencing court must impose a sentence substantially below the applicable Guidelines range if such a sentence is sufficient, but not greater than necessary, to promote the purposes of § 3553(a)(2). See United States v. Bouloute, 185 Fed. Appx. 102, 106 (2d Cir. 2006) (district court properly selected lesser sentence because, after considering all relevant factors, it determined that the lesser sentence was

10

sufficient but not greater than necessary to do justice). In doing so, the court need only conduct a thorough analysis of the § 3553(a) factors and adequately set forth the circumstances justifying the sentence imposed. Gall, 552 U.S. at 50.   Such a sentence will be given deference and will only be overturned if it is substantively or procedurally unreasonable. Id.; Rigas, 583 F.3d at 114.

Here, an analysis of the § 3553(a) factors demonstrates that a sentence of probation is sufficient but not greater than necessary to meet the goals of sentencing.

A. The Sentencing Guidelines Do Not Require A Custodial Sentence.

1. Aleynikov's Offense Conduct Did Not Involve Any Actual Or Intended Loss To Goldman.

The Government's theory of prosecution — from the time of the Indictment through its rebuttal summation — was that Aleynikov stole code constituting a portion of Goldman's high frequency trading system to enable him to meet the onerous development demands of his new employer, Teza, as expressed by Teza's founder, Misha Malyshev ("Malyshev"). To animate that theory, the Government relied principally on an email Malyshev sent Aleynikov and the other members of his development team on May 31, 2009. In that email, Malyshev urged his team to get Teza's trading platform up and running within six (6) months. (Gov't Ex. 707.) Specifically, Malyshev wrote:

> Gentlemen,
>
> It is now less than 6 months left to the system launch. Huge body of work ahead of us. We need the fastest and most scalable trading platform that will be our edge on the market. We need an analytics platform that will allow us [to] invent and develop new trading strategies.   In combination these two will propel us ahead of competition.
>
> I have no doubt that with the team that we are putting together we will become the best in the business. That being said, we have to focus.   We are up against experienced and very wealthy

11

competitors that are currently way ahead of us, and using their cash from last year to buy their way out of tougher times ahead. We are better and smarter but we have [to] be moving full speed ahead to even catch up with them.

So triple our focus, let's execute relentlessly, and strive for excellence in everything we do. The future is ours to own and the game is already on. *Let's move fast.*

Misha

(Gov't Ex. 707) (emphasis supplied).

"Let's move fast" — the subject line and closing sentence of Malyshev's email — was also the opening line of the Government's opening summation and the centerpiece of its argument to the jury as to Aleynikov's motive for copying computer source code from Goldman several days after that email was sent. Reflecting the centrality of this theme, the Government's summation began as follows:

> *"Let's move fast."* Ladies and gentlemen, that was the subject line of an e-mail that the defendant, Sergey Aleynikov, received from his new boss, Misha Malyshev of Teza technology, just a short time before his last day of work at Goldman Sachs. *Let's move fast* was supposed to be inspirational to someone like the defendant, who had the responsibility of starting up Teza's high-frequency trading system and getting it up and running in six months or less. Now, what did the defendant do when he got that e-mail? The evidence is in now and it's clear. The defendant chose to become a thief, a high-tech thief, but a thief nonetheless. He chose to steal the code to important parts of Goldman Sachs' high-frequency trading system.

(12/9/10 Tr. at 1452:2-14 (Gov't Summation) (emphasis supplied).)   According to the Government, Aleynikov decided to steal Goldman's source code after receiving that e-mail because he was under intense pressure to build the fastest and most scalable platform (Aleynikov's area of expertise) in less than six months:

> When Aleynikov . . . was going to go to Teza, he was going to be under incredible pressure to deliver on the expectations that they had for him and to justify the high salary that they were paying

12

> him. That is why he took Goldman Sachs code. That's why he
> started the process of stripping out information from Goldman
> Sachs and passing it off as his own work. ***Not because Teza had***
> ***hired him to steal Goldman Sachs code. Because Aleynikov felt***
> ***that he needed to justify his position at Teza***. And he needed a
> cheat sheet. He needed something to help him.

(12/9/10 Tr. at 1528:11-20 (Gov't Rebuttal) (emphasis supplied.) The Government's theory had

thus shifted dramatically from the date of Aleynikov's arrest to the time of its rebuttal

summation. When Aleynikov was arrested, to fanfare heard 'round the world, the Government

accused him of having stolen Goldman's entire trading platform, enabling him to trade (and roil

international financial markets) immediately unless detained. The clear allegation was that he

had stolen something that could and would be used to his and Teza's immediate economic

benefit and Goldman's immediate economic harm. But by the time the Indictment was returned,

the Government's allegation had shrunk to one that Aleynikov had not stolen Goldman's entire

platform with the intention of plugging it in elsewhere to compete with Goldman, but rather had

stolen source code related to Goldman's trading system to use as a kind of "cheat sheet." By

then, the Government well knew that Aleynikov had downloaded only a portion of Goldman's

system — a few hundred thousand lines out of a system comprising millions of lines. (12/1/10

Tr. at 374:20-25 (Walker); 12/2/10 Tr. at 606:19-607:18 (Schlesinger).)   But still, the

Government implied strongly that Teza had hired Aleynikov at a greatly increased salary

because it was paying him to bring Goldman's code to Teza. It was not until Teza's Misha

Malyshev stepped down from the witness stand that the Government was forced to acknowledge

— because the jury well knew — that Teza had not hired Aleynikov to steal Goldman's code at

all. To the contrary, Malyshev made it clear that Teza did not hire Aleynikov to bring

Goldman's code to Teza; that Teza did not even have its trading strategy developed at the time of

Aleynikov's arrest; that Teza had no need or desire for Goldman's code and did not even regard

Goldman as a competitor; and that Teza would not have taken Goldman's code if it had been offered to Teza free of charge. (12/6/2010 Tr. at 791:22-792:6, 807:19-21, 827:16-828:1, 831:23-834:4, 836:4-12, 844:8-845:13, 845:23-846:5, 848:25-849:10, 850:4-7.) When Aleynikov highlighted that compelling evidence in summation, the Government was forced, in its rebuttal, to expressly disclaim the argument that formed the basis for its original attempt to imprison Aleynikov — that Teza had hired Aleynikov to steal Goldman's code. Thus, in the last analysis, the Government's successful argument to the jury was not that Aleynikov stole Goldman's trading system to compete with Goldman, but rather that he stole a portion of that system with the intention of making it easier for him to perform his job at Teza — to write computer code to implement whatever as-yet-undeveloped trading strategy Teza chose to pursue.

That shift in theory may have saved a conviction for the Government, but it surely did not salvage its misbegotten and entirely disproven theory that Aleynikov intended to inflict economic harm on Goldman by using its entire trading platform to compete with Goldman. Taking a portion of Goldman's system to make it easier to develop a new system at Teza reflects Aleynikov's intention to subject Goldman to potential loss (and thus to harm Goldman within the meaning of the EEA), but it in no way reflects an intention on his part to inflict economic or pecuniary loss on Goldman, as required to justify enhancing his sentence. In other words, in the entirely hypothetical and strikingly remote event that Malyshev were to develop and deploy the exact same trading strategy as Goldman with respect to the exact same securities traded by Goldman at the exact same time, Goldman could have suffered economic harm by virtue of Aleynikov's theft. But it is simply not the case that Aleynikov could ever have intended or known that remote result would occur. Indeed, the proofs at trial made clear that Aleynikov had neither the ability nor the responsibility to develop a trading strategy for Teza or anyone else.

14

Aleynikov was responsible for making, and was able to make, systems run fast. He was neither a trader nor a quant. Thus, it was not Aleynikov's job to develop the "analytics platform" or "trading strategies" referred to in Malyshev's email. (Gov't Ex. 707.) Yet having not only disowned but also concealed from the jury that it ever believed that Aleynikov had stolen Goldman's entire platform, the Government would now like him sentenced as though he had done so. But the facts proven at trial — as distinguished from the discredited theory the Government now seeks to resurrect in an attempt to subject Aleynikov to a prison sentence out of all proportion to his crimes of conviction — make clear that Aleynikov at most put Goldman at risk of a remote possibility of economic harm, but that he certainly did not intend or know his actions would result in such harm. Thus, under the Sentencing Guidelines, his sentence simply cannot be enhanced based upon loss or intended loss to Goldman.

a. Loss Amount

Under USSG § 2B1.1(b), a defendant's offense level is increased based on the loss that attended the crime. It is the Government's burden to prove loss amount at sentencing. United States v. Rizzo, 349 F.3d 94, 98 (2d Cir. 2003). Subject to certain exclusions, the amount of loss is "the greater of actual loss or intended loss." USSG § 2B1.1, cmt. n.3(A). The Guidelines define "actual loss" as the "reasonably foreseeable pecuniary harm that resulted from the offense." Id., cmt. n.3(A)(i). Similarly, they define "intended loss" as the pecuniary or economic harm that was intended to result from the offense. In the Second Circuit, intended loss refers "'to the defendant's subjective expectation, not to the risk of loss to which he may have exposed his victims.'" United States v. Confredo, 528 F.3d 143, 152 (2d Cir. 2008) (quoting United States v. Yeaman, 194 F.3d 442, 460 (3d Cir. 1999)). The sentencing court makes a reasonable estimate of the loss and its loss determination is afforded considerable deference. USSG § 2B1.1, cmt. n.3(C).

(1)   Actual Loss

There was no evidence at trial that Goldman suffered any actual economic loss. To the

contrary, there was no allegation, either in the Indictment or at trial, that Goldman ever lost

possession of its source code or that there was ever any interruption in its trading. Moreover, the

record establishes that neither Aleynikov nor Teza ever put any of the subject code to any use,

much less to a use that would have caused Goldman actual economic loss. Indeed, although

Aleynikov brought Goldman code with him to a meeting at Teza's offices on July 2, 2009, Teza

employee Demian Kosofsky testified that (a) at no time during that meeting did Aleynikov

suggest that he intended to bring Goldman code to Teza; (b) he had no reason to believe that

Aleynikov brought Goldman code to Teza; and (c) Aleynikov never discussed the Goldman code

at the July 2, 2009 meeting or at any meeting at any time. (12/6/2010 Tr. at 896:14-19

(Kosofksy).)[1] Clearly, Goldman suffered no actual pecuniary loss as a result of the offenses of

conviction.

(2)   Intended Loss

"Intended loss" means the pecuniary harm that was intended to result from the offense.

USSG § 2B1.1, cmt. 3(A)(ii). "Pecuniary harm," in turn, means harm that is monetary or that

otherwise is measurable in terms of money. USSG § 2B1.1, cmt. n.3(A)(iii). The EEA, which

the jury convicted Aleynikov of violating, proscribes downloading a trade secret with the intent

or knowledge that the offense will injure any owner of the trade secret. 18 U.S.C. § 1832(a).

But the jury's finding that Aleynikov intended or knew that his actions would injure Goldman

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[1]   While there was evidence regarding the extent of Goldman's investigative efforts leading
to and following its discovery of Aleynikov's downloads (see, e.g., 11/30/11 Tr. at 91:6-
94:2 (Yanagisawa)), the application notes to USSG § 2B1.1 make clear that costs
incurred by victims primarily to aid the government in the prosecution and investigation
of an offense are excluded from the definition of loss. USSG § 2B1.1, cmt. n.3(D).

does not imply that he intended to cause Goldman pecuniary harm. To the contrary, the Second

Circuit and other courts have drawn a distinction between intent to harm (needed to convict a

defendant of violating the EEA and other statutes) and intent to cause pecuniary loss (needed to

enhance a defendant's sentence under the Federal Sentencing Guidelines.)

In United States v. Karro, 257 F.3d 112 (2d Cir. 2001), for example, the defendant argued

that she did not have the requisite intent to harm the bank victim of her credit card fraud (and

thus did not have the requisite intent to harm to violate the statute) because she always intended

to pay her credit card balances (and thus not to cause the bank pecuniary harm) even though her

accounts were fraudulently obtained. The district court rejected that argument and the Second

Circuit affirmed, explaining that "[i]ntent to harm . . . can be inferred from exposure to potential

loss." Id. at 188 (quoting United States v. Chandler, 98 F.3d 711, 716 (2d Cir. 1996)). Thus the

Court reasoned that the defendant's intent to repay her loan — and thus her lack of intent to

cause economic loss to the bank — was not relevant to the question of guilt or innocence, which

turned on whether the borrower intended to inflict harm. The Court found that the intent-to-harm

element of the offense was satisfied because the defendant withheld information from the lender

that inhibited the bank's proper assessment of the risk of the transaction, id. — thus exposing it

to potential harm. The defendant's argument that she had no intent to inflict economic loss upon

the bank was not relevant to the question of whether she possessed the requisite intent to harm

required by the statute. Id.

Here, the EEA, like the mail fraud statute at issue in Karro, contains an intent-to-injure

element. Section 18 U.S.C. § 1832(a) prohibits anyone from downloading "with intent to

convert a trade secret, that is related to or included in a product that is produced for or placed in

interstate or foreign commerce, to the economic benefit of anyone other than the owner thereof,

and intending or knowing that the offense will injure any owner of that trade secret." The jury's finding of Aleynikov's guilt as to Count One therefore implies that he intended to injure Goldman. Such a finding of guilt, however, does not imply that Aleynikov intended to cause a monetary loss to Goldman, and the evidence does not support a finding that he intended to cause such a loss. Just as Karro, despite her expressed intent to repay her credit card balances, evidenced sufficient intent to harm the bank to sustain a finding of guilt by intentionally withholding information from the lender (thus putting it at greater risk of loss than it would have intentionally accepted), a finding that Aleynikov intended to injure Goldman by converting its source code, and thereby exposing it to potential harm, is not tantamount to a finding that he intended to cause Goldman economic loss within the meaning of USSG § 2B1.1.

First, the testimony of Aleynikov's supervisor at Goldman, Adam Schlesinger, established beyond dispute that Aleynikov had the technical ability and administrative access rights to Goldman's computer system to simply download the entire trading platform if he so desired:

> Q. Mr. Schlesinger, my point is Sergey Aleynikov had admin access, right?
> A. Correct.
> Q. So he could have bought a USB drive at Staples, fair?
> A. (No response).
> Q. You must answer verbally.
> A. He could have bought a USB drive at Staples.
> Q. What's the approximate cost of a USB drive?
> A. I don't know; fifteen dollars, ten dollars.
> Q. So, if Mr. Aleynikov had wanted to download Goldman Sachs' entire high-frequency trading code and walk out the door with it, all he would have had to do, with the administrative access he had, was go to Staples on the way to work, buy a USB drive, plug it into his computer and download the whole thing, right?
> A. That's correct.

(12/2/10 Tr. at 564:3-17 (Schlesinger).) The fact that Aleynikov could have very easily, but did not, copy the entire Goldman trading system belies any suggestion that he intended to use

18

Goldman's system to enable Teza to take trading profits away from Goldman and thus cause it pecuniary loss. Had Aleynikov intended to harm Goldman in that way, he surely would have taken the entire system — which Adam Schlesinger confirmed he could have quickly and inexpensively done — and enabled Teza to use that system to compete immediately and directly with Goldman. In fact, Aleynikov could have shopped Goldman's platform qua platform to a firm such as Tower Research Capital ("Tower") and secured an agreement to be paid a percentage of the profits or market share that firm took away from Goldman. That is precisely what the record reflects occurred in Agrawal, where the defendant secured his job and compensation package at Tower based entirely on the system he had stolen from SocGen. Here, by contrast, although the Government initially took the position that Aleynikov stole the entire platform and was thus able to compete with Goldman at its own game, it completely disclaimed that theory at trial and admitted that he only downloaded a portion of the trading platform. (***Compare*** 7/4/09 Tr. at 7:2-12 ("What the defendant is accused of having stolen from this investment bank . . . is their proprietary, high-quantity, high-volume trading platform with which they conduct all of their trades in all major markets within the United States and other places"); id. at 16:21-24 ("I should put that there's never been any breaches in anywhere of this magnitude before of the bank where the entire platform has gone out."); id. at 17:6-9 ("So I do want to say that this is the most substantial theft that the bank can remember ever happening to it, in the sense that the entire platform has been stolen."); ***with*** 6/29/10 Tr. at 15:7-13 ("As stated by Goldman's counsel the government has not alleged theft of the entire trading platform, the indictment in paragraph 12 makes that clear. The complaint also did not allege the entire trading platform. There were statements at the bail argument about the platform, but in any case the

indictment now alleges just a portion of the trading platform as I said in my paper that has been provided to the defendant.")

Second, while the theft of portions of Goldman's trading platform supports the Government's theory that Aleynikov intended to benefit himself by making his job easier and enabling Teza to trade more quickly, the evidence does not support a finding that Aleynikov intended to cause economic loss to Goldman. Indeed, every Government witness to testify on this topic made clear that unless the thief were deploying its code and generating the same prices and trades as Goldman, any argument that Goldman could suffer pecuniary loss from the theft of the source code taken by Aleynikov would be pure speculation. For example, when asked how Goldman could be affected if he were to assume that an individual had access to portions of the code, knew how it worked and intended to deploy it, Paul Walker, a Goldman Managing Director and partner in fixed income currency and commodities, testified:

> If an individual were deploying our code and someone were generating the same prices and trades as we were, we would at least have **the possibility of losing market share**, having diminished ability to make money in the business. I suppose I can imagine ways that a competitor could change their business strategy knowing what our software is, but that's harder to imagine.

(12/1/10 Tr. at 347:21-348:5 (Walker) (emphasis supplied.) That pecuniary harm to Goldman was entirely speculative was echoed by another Government witness, Adam Schlesinger, Aleynikov's immediate supervisor, who testified:

> It would depend on the nature of the competitor to begin with, but broadly speaking, I would say that the harm would fall into two categories. First, as speed is one of the most crucial things, is of crucial importance, some of the components that we have we feel are state of the art, and we would not be happy for competitors to realize that they are faster, slower or whatever. So certainly speed in some of the components we would not be happy if that source code was released. It would also **enable a competitor to compete** with us, whether it's because they have improved speed because of

20

> some of our software, or if their time to market is reduced because they have software they can now deploy, that would impact our P&L.

(12/1/10 Tr. at 479:16-480:9 (Schlesinger) (emphasis supplied.)

Speculation that Goldman would have "the possibility of losing market share" because its software would "enable a competitor to compete" does not confer "intent to cause economic harm" upon Aleynikov within the meaning of the Federal Sentencing Guidelines. Indeed, the testimony of Walker and Schlesinger makes clear that the theoretical pecuniary harm they envisioned could only possibly be suffered if the individual or company employing Goldman's code was competing for the same investment opportunities in the same securities at the same time as Goldman.   The Government's expert, Benjamin Van Vliet, confirmed as much throughout his testimony, explaining that with the exception of options trading, a firm could gain a competitive advantage if it had the trading infrastructure of a competitor only if it used the same or a substantially similar strategy:

> if you are implementing the exact same strategy as I am, you're going to be there every time I am reaching for the cookie jar. Now, in options trading, options, because they are derivatives, and derivatives by their nature are what we call a zero-sum game, which means we are all competing and I only make money at the expense of market participants who lose. That's the nature of a zero-sum game. Stocks are not a zero-sum game by the way. So even if your strategy isn't the exact same as mine, it's a much more competitive environment if you have a particular speed advantage now in a strategy that's similar, because we are all making money at the expense of each other. So again, it's sort of an indirect thing, but now you're still going to be impinging upon my ability to make money.

(12/2/2010 Tr. (Van Vliet) at 699:18-700:11; see also 12/2/10 Tr. at 725:11-21 ("if someone has got the same strategy as you do and is just as fast as you are, you know, every time you make a decision to go for the cookie jar, someone's made the same decision at the same time with the

same speed, and it only stands to reason you're going to make less profit. You're going to get

fewer cookies, but in this case you're going to make less profit. That's going to impinge on your

ability to continue to make money").)   Although its own expert thus acknowledged the only

scenario in which Goldman could have suffered pecuniary harm by dint of Aleynikov's

downloads, it introduced no evidence as to Goldman's trading strategies, and the only evidence

introduced as to Teza's strategies was that none existed at the time of Aleynikov's alleged theft

(and for some time thereafter). (12/6/2010 Tr. at 854:17-23 (Malyshev).)   Moreover, Misha

Malyshev testified unequivocally that Teza does not trade options. (Id. at 787:22-25.)   As a

result, there was no evidence to suggest that Aleynikov could have intended that Goldman suffer

an economic loss by his use of its proprietary source code in building Teza's trading system.

Thus, while the evidence showed the *possibility* that in a "perfect storm," Goldman could

have been injured by competitive use of its code as required under 18 U.S.C. § 1832, there was

no basis to conclude that Aleynikov *intended* to cause pecuniary harm to Goldman within the

meaning of the Guidelines. Because there was no actual loss to Goldman, and there is no

evidence to support any intended loss, the sentencing enhancement for loss amount under USSG

§ 2B1.1(b)(1) should not apply.

<div align="center">(3)   Gain</div>

If there is actual or intended loss in an amount that cannot be reasonably determined, the

Guidelines direct the Court to use the gain that resulted from the offense as an alternative

measure of loss. USSG § 2B1.1, cmt. n.3(B). The Second Circuit has repeatedly emphasized,

however, that where, as here, there is no actual or intended loss, the district court cannot employ

gain as a substitute for loss.

The Government urged the jury on a number of occasions that Aleynikov's prime motive

was to benefit his development efforts. In its opening statement, the Government argued:

<div align="center">22</div>

This man, Sergey Aleynikov, the defendant, stole critical parts of a top secret program that a prominent investment bank, his former employer, used to make millions of dollars trading on financial markets around the world. Why did he do that? The answer is simple. He took it because he was jumping ship from that bank to join a new competitor, a company called Teza Technologies, which was building its own trading system. The evidence will show that the defendant knew that making off with those key parts of the program would help him develop a system for Teza to do the same thing very quickly.

(11/30/10 Tr. at 37:8-19 (Gov't Opening).) Likewise, in its summation, the Government argued:

Why did he do this? Why did he steal code to Goldman Sachs' proprietary high-frequency trading system? Well, as we said at the start of the trial, the answer to that is clear. He wanted to have Goldman's code so that he could cheat, so that he would have a shortcut or a road map to creating the software for a competing high-frequency trading system that would make him and Teza millions of dollars. He wanted to make himself look good in his new job, a job in which he was going to receive three times as much money as he was making at Goldman, and a job for which he negotiated aggressively for the salary and every possible perk that he could get. He then uploaded some of those same Goldman Sachs files to Teza's server, and he brought the stolen code with him to Chicago for a meeting at Teza.

(12/9/10 Tr. at 1453:9-22 (Gov't Summation).) In its rebuttal summation, the Government argued:

When Aleynikov . . . was going to go to Teza, he was going to be under incredible pressure to deliver on the expectations that they had for him and to justify the high salary that they were paying for him. That is why he took Goldman Sachs code. That's why he started the process of stripping out information from Goldman Sachs and passing it off as his own work. Not because Teza had hired him to steal Goldman Sachs code. Because Aleynikov felt that he needed to justify his position at Teza. And he needed a cheat sheet. He needed something to help him.

(12/9/10 Tr. at 1528:11-20 (Gov't Rebuttal).)

Simply put, the Government's entire theory of prosecution — that Aleynikov took

Goldman's source code to enable him to build a trading platform for Teza in the six months left

before its system launch — was that Aleynikov intended to gain from the theft at Goldman's expense by using its source code to help him more quickly develop a trading system for Teza. That is not an argument — and the Government did not prove — that Aleynikov intended to cause Goldman an economic loss, as required to justify enhancing his base offense level. Aleynikov was not a disgruntled employee (12/2/10 Tr. at 609:17-22, 611:6-8 (Schlesinger)), and there simply was no evidence that he intended to harm Goldman by using its platform to steal its profits.

In United States v. Robie, 166 F.3d 444 (2d Cir. 1999), the Second Circuit remanded a postal theft case for resentencing because the district court improperly substituted the defendant's gain for the loss to the Postal Service when, in fact, there was no loss or intended loss to the Postal Service. The Second Circuit explained, "If there was no economic loss to the Postal Service, there was no 'loss' for Guidelines purposes." Id. at 455; see also United States v. Chatterji, 46 F.3d 1336, 1340 (4th Cir 1995) ("Gain is only an alternative measure of some actual, probable, or intended loss; it is not a proxy for loss when there is none."); United States v. Andersen, 45 F.3d 217, 221-22 (7th Cir. 1995) ("While gain may normally prove an adequate surrogate for loss, gain may be used only as an alternative method of calculation when there is in fact a loss, and only if use of the gain results in a 'reasonable estimate of the loss.'"); United States v. Haddock, 12 F.3d 950, 960 (10th Cir. 1993) ("The enhancement is only for loss to victims, not for gain to defendants. The defendant's gain may be used only as an 'alternative estimate' of that loss; it may not support an enhancement on its own if there is no actual or intended loss to the victims.").

24

(4)   Other Estimates Of Loss

The Application Notes set forth various other factors that a Court can consider to estimate

the amount of a loss, depending on the circumstances of the case. USSG § 2B1.1, cmt. n.3(C).

Those factors, however, facilitate estimating a loss when the evidence establishes that one exists.

Where, as here, the victim has not suffered any loss, those factors are not applicable. United

States v. Dickler, 64 F.3d 818, 826 (3d Cir. 1995) ("[A]s our precedent and the Sentencing

Guidelines make clear, it is a reasonable estimation of loss, not an alternative, unrelated value,

that the sentencing court must ascertain."). Moreover, these factors would not in any event assist

in forming a reasonable estimate of loss. Application Note 3(C)(i) advises the Court to consider

the fair market value of the property unlawfully taken or the cost to the victim of replacing the

property. Here, it is undisputed that Goldman did not lose use of the source code Aleynikov

downloaded, and there was no evidence that Goldman's proprietary code had any fair market

value. Indeed, the only potential beneficiary of the stolen code, Teza founder Misha Malyshev,

stated that he did not want the code and did not ascribe any value to it. Specifically, Malyshev

testified that (a) Teza intended to develop its own software and never planned to import

computer code from anywhere else into Teza; (b) it was Teza's policy that employees were not

permitted to bring with them proprietary information belonging to former employees; (c)

Aleynikov's agreement with Teza prohibited him from bringing with him to Teza any source

code belonging to prior employers (GX 704, GX 706); (d) Aleynikov never told him or anyone

at Teza that he would be bringing with him to Teza code from his former employer; (e) if

Aleynikov told Malyshev that he was bringing with him code from his prior employer, Malyshev

"would fire him on the spot"; (f) he did not consider Goldman to be a competitor in the high

frequency trading business because they were not very good at trading high frequency; and (g)

he would not have taken Goldman's high frequency trading platform and used it at Teza if

25

Goldman offered it to Teza free of charge. (12/6/2010 Tr. at 12/6/2010 Tr. at 791:22-792:6, 807:19-21, 827:16-828:1, 831:23-834:4, 836:4-12, 844:8-845:13, 845:23-846:5, 848:25-849:10, 850:4-7).   Unlike the owners of Tower, who bargained with Agrawal for SocGen's system, Malyshev — who personally earned $75 million in cash compensation alone in one year from high frequency options trading at Citadel — was determined to build the fastest system in the world. It was no part of his plan to acquire an existing system from Goldman, whose entire high frequency trading business generated less than a quarter of the $1,145,000,000 Malyshev's group earned at Citadel in 2008. (Id. at 785:23). As Malyshev explained, "if you want to be the fastest the only chance to do it is to do it yourself." (Id. at 792:5-6.) He went on to testify: "I left Citadel to build something that can be — with the idea that I can build something that can be the best in the world. I don't want somebody else's system." (Id. at 834:2-4)

Application Note 3(C)(ii) supports using the cost of developing proprietary information or the reduction in value of that information resulting from the offense as a factor in estimating a loss amount. Here, however, the Government did not adduce any evidence at trial from which Goldman's cost to develop its source code could be reasonably estimated. Indeed, although the jury did not credit Aleynikov's argument that he downloaded source code for the sole reason of gathering open source material, the testimony was undisputed that the materials Aleynikov downloaded contained substantial open source material which, by definition, is owned by the public. (12/8/10 Tr. at 1333:8-11 (Goldberg).) Indeed, the Government's own witnesses did not know the extent to which Goldman's allegedly proprietary files incorporated open source software. (12/1/2010 Tr. (Walker) at 384:15-24 (testifying that he does not know whether any open source software was incorporated inside the proprietary files of code in the directory (GX 224)); id. at 384:25-385:5 (testifying that he does not know whether any open source software

was incorporated inside the proprietary files in the TV directory); id. at 385:12-20 (testifying that

it is possible that some open source software was contained in the files (GX 224)); 12/6/2010 Tr.

(Van Vliet) at 929:8-12 (admitting that he did not do any independent analysis to determine the

source of the code that he found in the files he reviewed); id. at 930:4-10 (testifying that he does

not know if there is a way to determine whether and to what extent particular lines of computer

code are open source code or proprietary.); 12/7/2010 Tr. (Kumar) at 1053:12-19 (testifying that

he is unaware whether Goldman separates open source code from code that it deems to be

proprietary code); id. at 1054:2-8 (testifying that there is no Goldman policy for keeping open

source code separate from proprietary source code); id. at 1058:1-5, 21-23 (testifying that one

cannot tell from looking at the script whether OBB embeds within it publicly-available

information). Thus, there is no principled evidentiary basis for separating the proprietary from

the open source materials, then attributing a cost of development to the proprietary materials.

Finally, there was no allegation of loss in value of Goldman's information as a consequence of

the offense conduct. Nor are the remaining factors set forth in Application Note 3(C) in any way

applicable in this case. In sum, the Application Note factors for estimating loss do not apply in

this case because Goldman did not suffer an actual loss and there was no evidence to support an

intended loss.

For all of the reasons set forth above, Sergey Aleynikov's conviction for intending to

harm Goldman by copying a portion of the source code for its high frequency trading system to

ease his development responsibilities at Teza — thus subjecting Goldman to the remote

possibility that Teza might somehow choose to employ the exact same strategy as Goldman with

respect to the exact same securities — simply cannot be viewed as establishing his intention to

impose economic harm on Goldman, as is necessary to enhance his Guidelines offense level.

27

2.   The Government's Proposed Loss Amount Is Speculative And Substantially Overstates The Seriousness Of The Offense.

Even if there were a basis for applying USSG § 2B1.1, cmt. n.3(C)(ii) in this case, which there is not, no proof was adduced at trial to do so beyond the level of rank speculation, which is not a permissible basis for determining loss amount. United States v. Comer, 93 F.3d 1271 (6th Cir. 1996) ("[A] court may not attribute a loss to a defendant based on mere speculation."); United States v. Wilson, 993 F.2d 214, 218 (11th Cir. 1993) (holding that although courts may use estimates to compute loss amount they "must not speculate concerning the existence of a fact which would permit a more severe sentence under the Guidelines."); United States v. Galluzzo, No. 94-3855, 1995 U.S. App. LEXIS 9997 (7th Cir. May 2, 1995); United States v. Muzio, No. 09-20327, 2010 U.S. Dist. LEXIS 64781 (S.D. Fl. Jun. 15, 2010).

None of the bases for calculating loss the Government proposed to the Probation Department move beyond the speculative level. The first factor the Government cites is the fair market value of the property unlawfully taken, copied or destroyed. While this is undoubtedly an appropriate method for calculating intended loss in certain cases, U.S.S.G. § 2B1.1, cmt. n.3(C)(i), it is clearly not applicable here because, as the Government admitted to Probation, "[t]he computer source code is not for sale, so there is no set price for a fair market value." Undeterred by that dispositive fact, the Government attempted to *intuit* a fair market value for a portion of the source code Aleynikov was alleged to have taken (OBB) by analogy to what other departments at Goldman spent in 2010 to license a publicly-available off-the-shelf product (Wombat) that performs a function similar to OBB's. Not surprisingly, the Government cited no authority for calculating fair market value in the sentencing context in this fashion. Fair market

28

value is the price that a seller is willing to accept and a buyer is willing to pay on the open market in an arm's-length transaction. United States v. Boccagna, 450 F.3d 107, 115 (2d Cir. 2006). Again, Malyshev, the only person in a position to purchase the source code from Aleynikov, testified that Teza would not have taken Goldman's code if it had been offered to Teza free of charge. (12/6/2010 Tr. at 791:22-792:6, 807:19-21, 827:16-828:1, 831:23-834:4, 836:4-12, 844:8-845:13, 845:23-846:5, 848:25-849:10, 850:4-7.) Thus, even if the Probation Department or the Court credited the Government's suggestion that the fair market value of OBB was ▮▮▮▮▮ based on a comparison with Wombat, that would in no way support the Government's hypothetical loss amount of $7 to $20 million. The licensing fees paid by Goldman for Wombat in 2010 are irrelevant for the further reason that it is not related to the time of the offense. "Courts calculating loss for sentencing purposes uniformly hold that the fair market value of stolen property is the price a willing buyer would pay a willing seller at the time and place of the offense." United States v. Galvez, 108 F. Supp. 2d 1369, 1371 (S.D. Fl. 2000).

Next, attempting to use the cost to the victim of replacing the property as a measure of loss, the Government suggested that the $500 million Goldman paid to acquire the Hull Trading Company in 1999 would support a $7 to $20 million loss estimate. Goldman's investment in Hull does nothing to support the Government's loss estimate. The testimony regarding the Hull acquisition was that Goldman acquired that entire company — complete with human capital, including traders — as part of the deal, and that it was not clear how much of the purchase price was for software. (12/1/10 Tr. at 403 (cross examination of Paul Walker).) The Hull acquisition price thus provides no basis for a reasonable estimate of the loss attending Aleynikov's offense conduct. Likewise, the Government's argument that the salaries of programmers under the supervision of Adam Schlesinger could stand as a proxy for intended loss is deeply flawed.

While the Government correctly pointed to testimony establishing that Schlesinger supervised approximately 25 people in four groups who were compensated approximately $6.875 million in one year, the Government pointed to no evidence of the work performed by those employees — much less evidence that they all worked on the discrete portions of Goldman's trading system that Aleynikov was convicted of uploading, or what portion of their time was spent maintaining those programs. Because the Government has conceded that Aleynikov did not take Goldman's entire high-frequency trading platform — a sharp reversal of its initial position on the subject in July 2009 — combining the salaries of the programmers under Schlesinger's supervision does not provide a reasonable estimate of the intended loss to Goldman from Aleynikov's crime.

The Government next turned to application note 3(C)(ii) to U.S.S.G. § 2B1.1 to suggest that the cost of developing the source code or the reduction in the fair market value of the information that resulted in the offense is a reasonable means to calculate intended loss. That may be so in the abstract, and it was the method employed by the Government and the Probation Department in the <u>Agrawal</u> case. But the Government's attempt to apply the application note fails in this case because <u>there are no facts of record to support its analysis</u>. In its submission to the Probation Department, the Government returned to the $500 million purchase price for Hull and suggested that the figure "provides a frame of reference for evaluating the value placed on high-frequency trading systems by firms engaged in this business." Apparently, the argument is just this broad: Because Goldman paid a lot of money for a company that owned a long-outmoded version of its trading system, a component part of an entirely different system is today worth a lot of money. That sort of broad and unsubstantiated reckoning has no place in a Federal Sentencing Guidelines analysis. Beyond the fact that the system Goldman acquired when it purchased Hull bears no relation to the lines of source code Aleynikov downloaded, the Hull

30

purchase price is not relevant because, as stated above, that price reflected the acquisition of an

entire company, including human capital and other assets in addition to software, and Aleynikov

was not charged with stealing the entire system.

The Government also suggested that it would be reasonable to calculate loss based on a

percentage of Goldman's high-frequency trading income in 2009. Although there was evidence

at trial to the effect that Goldman's pre-tax income in 2009 from high-frequency trading was

$300 million, there was no evidence to suggest that use of the Goldman software downloaded by

Aleynikov, by Teza or any other third party, would cause a diminution in that income. Unlike

the Agrawal case, where the evidence showed the defendant's definite intent to use his former

employer's trading strategies, there was a distinct absence of any such evidence in this case. To

the contrary, every Government witness to testify on this topic made clear that any argument that

Goldman could suffer pecuniary loss from the theft of the source code taken by Aleynikov would

be pure speculation unless there was proof that Teza deployed Goldman's code and generated the

same prices and trades as Goldman. Thus, the Government's suggestion that loss should be

calculated by assuming a 2.5% loss — an entirely arbitrary percentage — in Goldman's market

share due to Aleynikov's activities highlights the unprincipled nature of its sentencing approach.

Even if there were a basis in the evidence to support the Government's loss estimate,

which there is not, it would substantially overstate the criminality of Aleynikov's offense. The

Second Circuit and other courts have recognized that downward departures may be warranted

when the loss overstates the seriousness of the offense. See United States v. Canova, 412 F.3d

331, 351 n.21 (2d Cir. 2005) ("[T]he Commission expressly authorizes courts to depart from the

Sentencing Guidelines when monetary loss either overstates or understates the seriousness of the

particular fraudulent conduct."); United States v. Thomas, 362 F.3d 360, 376 (6th Cir. 2004)

31

(concluding that the impossibility of the defendant's scheme and the gross disparity between the actual loss ($800) and the intended loss ($1.13 million) demonstrated that there was a "significant risk that 'the offense level determined under this guideline substantially overstates the seriousness of the offense . . . [and] a downward departure may be warranted) (quoting USSG Manual § 2B1.1, cmt. 18(C)); United States v. Stockheimer, 157 F.3d 1082, 1091-92 (7th Cir. 1998) (vacating defendant's sentence where district court mistakenly believed that circuit precedent barred it from considering the economic reality in determining whether to depart downward and where there may have been a persuasive basis for such a departure given the variance between the intended loss and the realistic possibility of such a loss).

        3.   The Government's Response To Aleynikov's Loss Analysis Is Not Sound.

The Government argued to the Probation Department that Aleynikov's theft of a portion of the computer code used in Goldman's trading system was analogous to stealing blueprints for components of GM cars such as engines, transmissions and the like and bringing them to a competitor auto manufacturer. Noting that such a theft would of course cause GM economic harm, that the new car company would of course compete with GM and that the thief would of course be held to have intended such a result, the Government asked the Probation Department to apply the same reasoning here. This is unsound. The evidence showed at most that Aleynikov stole components of a system and brought them to his new employer to facilitate his work in building a new trading system. The evidence was also clear that the new employer, Teza, had not even determined its trading strategy, and that Aleynikov was to have no role in such a determination. A car manufacturer builds cars, and by definition competes with other car manufacturers. But a firm that does high frequency trading competes only with other firms that trade in the same types of instruments on the same markets at the same time. Indeed, in its

sentencing memo in <u>Agrawal,</u> the Government implicitly acknowledged that for economic harm to flow from the theft of even an entire trading system, the competitor using that system would have to be seeking the same market opportunities in basically the same manner. There was no such evidence in this case, nor could there have been, as Teza had no such strategy. Perhaps for this reason, the Government urged Probation to find that a "competitor could 'potentially' take away some of Goldman's market share." Such speculation — wholly unsupported by the evidence — is simply not the stuff of a Guidelines loss calculation.

The Government also ridiculed Aleynikov's observation that Goldman never lost possession of its code, but did so in a manner that revealed its failure to appreciate the point. Goldman never lost a single moment of high frequency trading as a result of Aleynikov's downloads. Aleynikov never intended to or could have used Goldman's source code at Teza to harm Goldman, and Goldman never lost or could have lost market share as a result. It is difficult to imagine how such a crime could justify the same punishment as would be imposed on a thief who steals twenty million dollars.

The Government also argued that the defendant had already started to pass Goldman's code off as his own work, demonstrating his intention to use it at Teza. The evidence showed that Aleynikov uploaded various files to Teza, consistent at most with an intention to draw upon those files to facilitate his building of a new trading platform for Teza. But intending such use is simply not tantamount to an intention to impose pecuniary loss, which is what the Guidelines require.

The Government has contended that Aleynikov's decision not to copy Goldman's entire trading system is irrelevant to his intention to cause pecuniary loss, relying on a broad and unpersuasive bank robbery analogy. But Aleynikov's point is not that because he did not attempt

33

to download Goldman's entire program, it is fair to disregard the fact that he downloaded part of it.   Rather, his argument is that someone whose design was to harm Goldman by stealing its platform would not rationally pass up the opportunity to take the platform in usable form for the cost of a ten or fifteen dollar USB drive and instead download discrete portions of code that could be used as building blocks but no more.   Downloading portions of code may reflect an intent to harm Goldman within the meaning of the EEA by taking that which belongs to it, but it certainly does not reflect intent to cause Goldman pecuniary harm, which is what the Guidelines require to warrant a loss enhancement.

Finally, there was considerable trial testimony that Aleynikov downloaded open source code together with Goldman proprietary material.   The Government relied on testimony by defendant's expert, Benjamin Goldberg, that much of what Aleynikov downloaded contained Goldman copyright notices, but overlooked that portion of his testimony during which the jury saw for itself a side-by-side comparison of nearly identical source code, one plainly open source and the other bearing Goldman copyright header.   (12/8/10 Tr. at 1349-51.)   Indeed, Professor Goldberg testified, "given the fact that I had seen files that were clearly open source, that had had the header stripped away, I concluded that just because the open source header wasn't there doesn't mean that the file itself was not open source."   (Id. at 1357.)   Given that display and testimony, the Government's reliance on testimony regarding Goldman's copyright notices is hardly dispositive.   Moreover, the jury's finding that Aleynikov stole Goldman proprietary code does not discharge the Government's burden at sentencing of providing a reasonable estimate of the intended loss flowing from the theft of such code.   There simply was no testimony in this case as to the value — however calculated — of the proprietary portion of the material downloaded by Aleynikov.

4.   Aleynikov Did Not Employ Sophisticated Means

Although the PSR proposes application of a "sophisticated means" enhancement pursuant

to USSG § 2B1.1(b)(9)(C), (PSR ¶¶ 52, 62), such an enhancement is not appropriate in this case.

The commentary accompanying the Guidelines explains the meaning of "sophisticated

means" as follows:

> For purposes of subsection (b)(9)(C), "sophisticated means" means
> *especially* complex or *especially* intricate offense conduct
> pertaining to the execution or concealment of an offense.   For
> example, in a telemarketing scheme, locating the main office of the
> scheme in one jurisdiction but locating soliciting operations in
> another jurisdiction ordinarily indicates sophisticated means.
> Conduct such as hiding assets or transactions, or both, through the
> use of fictitious entities, corporate shells, or offshore financial
> accounts also ordinarily indicates sophisticated means.

USSG § 2B1.1, cmt. n.8(B) (emphasis supplied); see also United States v. Ratliff, 376 Fed.

Appx. 830, 840 (10th Cir. 2010) (acknowledging that "the commentary to the Guideline requires

that a 'sophisticated' scheme be 'especially' complex or 'especially' intricate").   This is

considered the authoritative construction of the phrase "sophisticated means." Stinson v. United

States, 508 U.S. 36, 37-38 (1993) (holding that "commentary in the Guidelines Manual that

interprets or explains a guideline is authoritative unless it violates the Constitution or a federal

statute, or is inconsistent with, or a plainly erroneous reading of, that guideline").

The manner in which Aleynikov downloaded source code from Goldman was not

"especially sophisticated."   Although the draft PSR states that Aleynikov erased records of the

commands he used, known as "bash history," and in so doing, attempted to hide the fact that he

transferred files out of Goldman's computer system (PSR, ¶ 16), the proof at trial revealed that

the means by which Aleynikov deleted the bash history was anything but "especially" complex

or intricate.   Indeed, Aleynikov's failure to use sophisticated means was the very reason why

35

Goldman so easily discovered his transfers.   This was demonstrated by the testimony of

Government witness Moazzam Ali, a Goldman Vice President of Information Technology, as set

forth below:

> Q. Mr. Facciponti just went through the bash history for Mr. Aleynikov's computer at Goldman Sachs, yes?
> A. Yes.
> Q. And that bash history shows that he downloaded select directories from Goldman's computers using a backup script that pulled such directories, am I right?
> A. That would be correct, yes.
> Q. Is it true, sir, that had Mr. Aleynikov desired to do so, he could have overwritten the bash history defaults set by Goldman Sachs?
> A. He could have.
> Q. He could have instructed this system not to capture bash history at all, right?
> A. You can instruct the computer to do so, yes. You can obviate your steps, if that's what you're asking.
> Q. You told the government, for example, that a bash history can be zero lines, right?
> A. You would have to set that before you start your session. You can't do that after the fact.
> Q. As long as Mr. Aleynikov had set that, it wouldn't have been any bash history there, right?
> A. If set, yes.
> Q. You found the backup scripts that he used to pull the directories very easily, right?
> A. The backup script, yes.
> Q. The one that you have talked to Mr. Facciponti about?
> A. Yes.
> Q. There was no attempt that you saw to delete that backup script, right, that was right on the history?
> A. No.
> Q. No, you agree with me?
> A. No. I agree there was no attempt to delete the backup script.
> Q. So for a highly competent computer programming expert, would you agree with me that this is a pretty half-baked way to try to cover one's tracks?
> MR. FACCIPONTI: Objection.
> THE COURT: Sustained.
> Q. Would you expect that someone who had expertise in computer programming would be able to take steps to conceal all of this information that you have just gone through with Mr. Facciponti?
> MR. FACCIPONTI: Objection.
> THE COURT: Overruled.

A. You can go through great lengths, it is hard but you can go to great lengths to cover your tracks, which may or may not be successful, depending on how good you are at concealing yourself.

Q. But you had no difficulty tracing these steps and seeing exactly where Mr. Aleynikov had been and what he had done, right?

A. There was some difficulty, because in the initial investigation, going to the user's home directory, there was no bash history.

Q. How long did it take you to figure it out?

A. Under 20 minutes.

(11/30/2010 Tr. (Ali) at 206-08.)

Simply put, Aleynikov's actions did not display a greater level of concealment than that of a typical misappropriation of computer source code. See United States v. Jones, 314 Fed. Appx. 876, 877 (7th Cir. 2009) ("A fraudulent scheme is sophisticated if it displays a greater level of planning or concealment than a typical fraud of that kind.") (quotation marks omitted); id. at 878 (finding defendant's equipment and methods went well beyond those available to the average internet user where he used advanced equipment such as a skimmer and re-encoder, coordinated payments through a contact in Estonia, and perpetrated numerous fraudulent identities in internet auctions). For these reasons, the Court should not apply a "sophisticated means" enhancement pursuant to USSG § 2B1.1(b)(9)(C).

Based on the above analysis, the appropriate total offense level is eight, calculated as follows: Aleynikov's base offense level is six, there should be no increase for loss or intended loss, there should be no increase for sophisticated means, and there should be a two-level increase for abuse of a position of trust. Thus, the appropriate sentencing range is zero to six months.

B. The Nature And Circumstances Of Aleynikov's Offense And His History And Characteristics Require A Non-Custodial Sentence.

As set forth in detail above, calculating the appropriate Guidelines level is only the first step in determining an appropriate sentence. The first factor the sentencing court must consider

under 18 U.S.C. § 3553(a) is "the nature and circumstances of the offense and the history and characteristics of the defendant." 18 U.S.C. § 3553 (a)(1). 18 U.S.C. § 3661, which governs the use of information during sentencing, provides that "[n]o limitation shall be placed on the information concerning the background, character, and conduct of a person convicted of an offense which a court of the United States may receive and consider for the purpose of imposing an appropriate sentence." As a result, the Court is free to consider a wide array of information under this factor. The information presented in this memorandum demonstrates that a probationary sentence is necessary because (1) the offense conduct of which Aleynikov was convicted is less serious than that found in other theft of trade secret cases; and (2) Aleynikov is a man of exceptional character who is widely admired and respected by those who know him.

      1. <u>The Nature And Circumstances Of Aleynikov's Offense Warrant A Non-Custodial Sentence.</u>

Although the jury convicted Aleynikov of violating the EEA and the ITSPA by illegally copying Goldman's trade secrets, his offense conduct did not reflect greed or an intention to cause pecuniary harm. As set forth in detail in section I.A.1 above, the Government successfully argued to the jury in this case that Aleynikov stole portions of Goldman's trading system with the intention of making it easier for him to perform his job at Teza — to write computer code to implement whatever trading strategy Teza chose to pursue. It was not the Government's theory, and there was no evidence at trial to support the proposition, that Aleynikov took computer source code to facilitate taking trades away from Goldman. In short, the nature of Aleynikov's offense is not such that it demands a term of incarceration as punishment.

      2. <u>Aleynikov's Extraordinary Character Warrants A Probationary Term.</u>

Aside from the conduct that brings him before the Court for sentencing, Aleynikov has led an exemplary life. As the attached letters from Aleynikov's friends and family attest, he is a

man of honor, caring and compassion.[2]   We respectfully submit that consideration of Aleynikov's character should move the Court to depart downward from any Guidelines sentence.

As the draft PSR notes, Sergey Aleynikov was born in Moscow, Russia in 1970. His father was a chemical engineer and his mother was a business analyst and computer programmer. He was born during the Communist era and was raised under modest economic circumstances in a government-assigned two-bedroom apartment in Moscow. His friend Yuliya Tsaplina, who has known Sergey Aleynikov for 23 years, described in her letter how Aleynikov came to this country and persevered through hard work and determination to build a successful life, which has now unraveled due to a lapse in judgment. Ms. Tsaplina recalled how as teenagers she and Sergey dreamed of coming to America because of the possibility of living a decent life without compromising one's sense of right and wrong. She described how Sergey came to this country two years ahead of her, with $300 in his pocket, and built a successful life by long days and nights of work doing menial jobs to pay expenses while going to school, excelling at his academic pursuits despite getting little sleep, and paying his dues through hard work and determination.

Lina Podles, who has known Aleynikov since he first arrived in America and is one of three financially-responsible persons who signed his appearance bond, spoke about how highly impressed she and her husband were with Sergey when he first arrived in this country. She explained how, rather than complaining about the adversity he faced and without any family to support him, Aleynikov always remained good natured and determined and took full responsibility for his actions.

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[2]   The twenty-four (24) letters of support submitted on Aleynikov's behalf are grouped and attached to this Sentencing Memorandum in alphabetical order by last name of the author.

Although Aleynikov, as a newly arrived immigrant to this country, was fully occupied between going to school full time and working full time, many of the people who wrote to support him now recount how Aleynikov took time to help them adapt to their new country during that time period. Reverend Vadim Arefiev writes about how he and his wife met Aleynikov at Rutgers in 1992. He says "Sergey had come to this country not long before we did but to us he seemed to be a real old hand: he helped us with everything, drove us to stores, helped us adapt to communicating in English, explained to us the functioning of administrative agencies in this country and at the University." Similarly, Yuliya Tsaplina explained how Aleynikov helped her and her family when they first came to this country in the early 1990s, even though at the time he was working two jobs and going to school part time. Despite the personal pressure he was facing, Ms. Tsaplina says, Aleynikov was "a source of optimism and inspiration, showing through his example that honest work in our new homeland can indeed pay off and make our dreams come true."

Many of those writing on Aleynikov's behalf shared stories that reflect his giving and selfless nature. Dr. Myrna Uytingco, who was a graduate student at Rutgers with Aleynikov in the early 1990s, described how she and Serge started a Ballroom Dance Club and Competitive Team at Rutgers, and how he instructed a beginners' class of college students in a language he was only beginning to learn. She recalled how he would assist students who needed extra help without reward or remuneration.

Lina Podles also described Aleynikov's willingness to help others. She writes, "[t]he Sergey that I know has always been very gracious about his knowledge and skills, sharing his experience and also never hesitating to help anyone who would ask him, whether it was in [a] professional setting or just purely in simple 'life-situational' needs. Whenever asked for help,

Aleynikov's answer was invariably 'I will be there right away.'"   Dr. Cheema, who, like

Aleynikov, immigrated to this country with little money and prospects, spoke movingly about his

good fortune at having Aleynikov as a neighbor.   He observed that Aleynikov's greatest

weakness and strongest quality is his inability to turn down a request for help.   He recounted how

he first met Aleynikov when his lawn sprinkler system froze and burst, and Aleynikov came to

his wife's rescue even though he did not even know Dr. Cheema's first name at that point.

Oleg Tsaplina described how he met Serge in Moscow in 1989 when they volunteered at

overcrowded and understaffed orphanages and helped restore monasteries that had fallen into

disrepair through years of state-imposed atheism.   Olga Sherman, who has known Aleynikov

since she emigrated from Russian in 1992, also noted how Aleynikov has always been "very

friendly, attentive to people, and ready to offer his help."   She offered as an example how

Aleynikov selflessly spent several hours to give her the benefit of his knowledge regarding

neural networks to help her with her Master's thesis.

While Aleynikov was forging his new life, he did not forget the family he left in Russia.

Aleynikov's mother, Liya Aleynikova, who traveled to the United States to support her son at his

trial and who will remain with him through sentencing, explained:

> Serge has always been a sensitive, caring, considerate, grandson,
> son, nephew and a good friend, caring for sick old grandmother
> and grandfather. He was always responsive to people. He was my
> only son and also the only son in my older sister's family, who
> couldn't have children. When he left to America, he bought his
> aunt and uncle a puppy for smoothing their pain of separation. In
> 1996 while on vacation in Moscow, he took care of the terminally
> ill cancer uncle. My husband was ill with cancer and Serge was
> looking for alternative healing and would send him medical drugs.

Ms. Aleynikova went on to describe Aleynikov as "a wonderful father."   After urging the Court

to "please be merciful and consider that Serge has already gone through a great deal of suffering

that affected our entire family," Ms. Aleynikov writes, "I understand that the jury found him

41

guilty of theft of trade secrets. However, this foolish act doesn't go in line with his whole life, with the way how we raised him to be an honest and hard-working person." She continued, "Everyone can make mistakes, and he did already have severe punishment — losing his job, destroying his career, shame and humiliation of publicity, losing a family . . . ."

The letters attached to this memorandum also make clear that Aleynikov's penchant for helping others was not limited to his personal life, but extended into the workplace as well. Many of the people who wrote to support Serge spoke about his selflessness, and his willingness to go above and beyond what was expected to help a friend in need. Michael Iacovelli, who worked with Aleynikov at IDT Corporation, described him as the kind of technician who everyone wanted to work with. He noted that "Serge could be counted on as a colleague and more important, as a friend. He would always be available to help, went to great lengths to understand what had to be done, and would give an honest assessment of what it would take to accomplish." David Manifold, who also worked with Aleynikov at IDT, spoke of the time Aleynikov spent helping him to understand and overcome difficult programming challenges. He was impressed by Aleynikov's kindness and lack of ego, and attested to the mentoring and encouragement Aleynikov gave to the entire development team. Igor Portnoy, who worked with Aleynikov at Goldman until February 2009, described how Aleynikov educated colleagues on the latest developments in the field and would spend his lunch time teaching them a new open source language.

In addition to his generosity of spirit, numerous supporters wrote about Aleynikov's extraordinary work ethic. Dr. David Barts, Aleynikov's brother-in-law, described being struck by Aleynikov's dedication to his work and the pride he took in the progress he achieved. Dr. Barts recounted how Aleynikov never stopped thinking about ways to improve the

42

applications he was working on at work and in the open-source community. Michael Iacovelli likewise spoke of Aleynikov's contributions to the open source community, which he described as the foundation of numerous mission-critical computer systems worldwide. Ilya Belenkiy also attested to Aleynikov's strong work ethic and described his non-stop efforts to find new work following his indictment.

Aleynikov also made an impression upon Tatayana and Yevgeniy Levin as a hard-working person who was enthusiastic about and proud of his job. David Manifold spoke of Aleynikov's "brilliant intellect, soft spoken manner, and cheerful approach to life." He shared with the Court his conversations with Aleynikov, in which Aleynikov expressed his philosophy of "doing the best work he could in order to benefit his employer and setting a good moral example for others."

In addition to Aleynikov's extraordinary commitment to his work, many supporters focused on his undying commitment to his young daughters, with whom he has managed to maintain a strong relationship despite the obstacles before him. Maria Leder, who was present for parts of the trial and has been a friend of the family for five years, described how she observed Aleynikov as a dad during a visit last summer with his daughters. He cooked and prepared salads for the girls to make sure they ate nutritious food, and walked in the woods with the girls and her son, teaching them about nature.

Tatyana and Yevgeniy Levin described Aleynikov as a gentle and loving and patient father who is dedicated to his family. Dr. Cheema spoke eloquently about Aleynikov's three beautiful daughters and their deep love of their father. He described how Aleynikov preferred reading stories and doing math questions with his daughters over anything else, and the great efforts Aleynikov had gone to since being indicted to maintain a sense of normalcy in their life.

He stated that "his daughters see him as a father, friend, teacher and are deeply in love with him." He implored the Court to permit the relationship to continue so Aleynikov could help in their development and maintain a sense of normalcy in their life. David Manifold similarly observed that Aleynikov's relationship with his daughters is clearly the most important thing in his life, and always has been. Aleynikov's aunt, Lyudmila Nesis, spoke movingly about her personal observations of the daughters' love for their father.

As these letters reflect, Aleynikov is particularly generous with his time and energy when it comes to his children and their friends. Many of those who wrote in support of Aleynikov came to know him because they have children of the same age. Marina Evenstein recounted how her children participated in many children's camps, birthdays and other activities where Aleynikov volunteered to teach classes in astronomy, math, chess and other areas of interest. She noted how much the children love him and appreciate his calm and patient demeanor. Julia Eisenberg similarly observed that every time she would visit the Aleynikov household, Aleynikov would plan interesting, educational and exciting activities for the children, such as musical performances and science experiments. Maria Leder attached to her letter a photograph taken at Aleynikov's birthday party in February, while he was under house arrest following his conviction, where he organized games and science experiments, and played guitar while the children sang and danced. Tatyana and Yevgeniy Levin, who observed Aleynikov at events such as this, remarked what a wonderful father they knew him to be.   Oleg Trigub and Alexey Lipatov, who have known Aleynikov for more than 10 years and have children of similar age, recalled many examples of similar moments. What they both recalled most vividly was the daughters' love for their father. In the words of Aleynikov's mother, "He truly loves them, he

44

plays with them, teaches science and cares about them — it's not easy with three little girls. And they in turn idolize him."

There is also significant evidence of Aleynikov's other strong character traits. Reverend Arefiev attested to Aleynikov's openness, readiness to help, extraordinary intellectual giftedness and reliability. He noted Aleynikov's long history of charitable giving to the St. John House for the Homeless — a history of giving that the Reverend only learned about when reviewing accounting reports for the organization, because Aleynikov had never spoken about it. Elaine and Vladimir Itkin described Aleynikov as friendly, warm, dedicated, honest and family-oriented. They noted that he spends all his free time with his girls and his family. They went on to say that he is trustworthy, strong, intelligent, educated, understanding, compassionate and a person with a deep soul. Igor Portnoy described Aleynikov's openness and inherent honesty. Olga Sherman, who has known Serge for eighteen (18) years, also described him as honest, open and generous. Marina Ratina, who first met Aleynikov in school in Russia in 1987 and has remained a close friend since they both immigrated to the United States, described Aleynikov as one of the most responsible, caring and honest people she has ever met. Ilya Belenkiy, who was a friend of Aleynikov's wife before their wedding in 2003 but now considers herself as much a friend to Aleynikov, stated that Aleynikov is extremely intelligent, but always spoke to her on equal terms and listened to what she had to say. Alexey Lipatov, who has known Aleynikov since he was 15, said that the best word he could use to describe Aleynikov is "wholesome."

Finally, many of those writing in support of Aleynikov attested to how aberrant the offense conduct was in their experience of his character. Speaking of Aleynikov's conviction, David Manifold remarked that "this one misstep does not begin to tell the story of this truly decent, good man." Even knowing the jury's verdict, Mr. Manifold went on, he continues to

45

trust and revere Aleynikov. Stas Rirak likewise said that the theft of computer code found by the jury was very unusual for the man he knows.

In sum, the letters describing Aleynikov paint a picture of a loving and caring father, son and nephew, a genial and valued friend, and an ethical and intelligent professional. These letters indicate that Aleynikov has built a solid and commendable reputation and is widely respected and admired by those who know him. Aleynikov's conviction may have changed the perception of him held by those who know him little. But these letters indicate that those who truly know the man continue to love and respect him despite his conviction. Aleynikov respectfully submits that his true character and nature, as evidenced by the attached letters, further support a non-custodial period of probation.

C. A Non-Custodial Sentence Is Necessary To Promote The Purposes of 18 U.S.C. § 3553(a)(2).

18 U.S.C. § 3553(a)(2) instructs the court to consider the purposes intended to be served by criminal sentences. Those purposes are "(A) to reflect the seriousness of the offense, to promote respect for the law, and to provide just punishment for the offense; (B) to afford adequate deterrence to criminal conduct; (C) to protect the public from further crimes of the defendant; and (D) to provide the defendant with needed educational or vocational training, medical care, or other correctional treatment in the most effective manner." 18 U.S.C. § 3553(a)(2). The sentencing court's overriding mandate is to impose a sentence sufficient, but not greater than necessary, to comply with these purposes. Particularly relevant to this § 3553(a) factor is Gall's discussion of probationary sentences, in which the Court emphasized "the 'substantial restriction of freedom' involved in a term of supervised release or probation." 552 U.S. at 44. The Court explained that individuals on probation "are subject to several standard conditions that restrict their liberty." Id. The Court elaborated on those restrictions as follows:

46

> Probationers may not leave the judicial district, move, or change jobs without notifying, and in some cases receiving permission from, their probation officer or the court. They must report regularly to their probation officer, permit unannounced visits to their homes, refrain from associating with any person convicted of a felony, and refrain from excessive drinking. . . . Most probationers are also subject to individual "special conditions" imposed by the court.

Id. at 48. Simply put, the Supreme Court made clear that sentencing courts should not view non-custodial, probationary sentences as a free pass for defendants, but instead as a real punishment with concrete, extremely detrimental restrictions.

With that admonition in mind, the § 3553(a)(2) purposes would be served by a non-custodial period of probation. As explained both above and below, Aleynikov has already suffered considerable punishment for his conduct. Perhaps the harshest punishment Aleynikov will ever suffer, one far worse than any term of imprisonment could be, is the knowledge that his conduct has brought harm to his young daughters, who, if a period of incarceration is ordered, will lose nearly all contact with him for an extended period of time. Quite simply, Aleynikov is fully aware that his daughters have suffered and will suffer indescribable emotional pain as a direct result of his actions — even if he is not sentenced to a period of incarceration.

Many of those who wrote on Aleynikov's behalf noted the deep humiliation he and his family have suffered since his arrest and indictment. Marina Evenstein, who has children the same age as Aleynikov's, notes how his arrest has put his family through public humiliation and prevented him from earning a living. Reverend Arafiev described the extreme humiliation Aleynikov has suffered from the media coverage of the case, and how even in remote villages in Russia, where the residents are ignorant of computer programming, they know about his offense. Oleg Trigub likewise recounted his experience of vacationing in the Dominican Republic and hearing other travelers discussing the case.

Aleynikov's brother-in-law described the pain that attended Aleynikov's arrest, job loss and the loss of his computers for a time. Dr. Barts explained that the devastation Aleynikov has suffered in his professional life was harsh not only to himself but to his daughters, family and friends. Similarly, Ilya Belenkiy explained how the disappointment and embarrassment that followed Aleynikov's indictment and inability to secure employment created financial and emotional hardship that adversely affected his marriage. As Belenkiy succinctly stated: "His wife left him, his relationship with his kids became much more complicated, he has to sell his house, and the bad publicity may permanently cripple his career and not let him ever reach his full potential."

Elaine and Vladimir Itkin also explained the toll that this case has taken on Aleynikov and his family:

> He appears very strong but the emotional and professional devastation can't be hidden. The family was worried about the girls entering school and being picked on. His wife was desperate in trying to take care of the kids and finding a job on her own. Serge had spent weeks and months in futile attempts trying to re-establish himself in the new career path. He knocked on all the doors and he searched for new opportunities only to find out dead walls in front of him. His inability to support and provide for the family have left him feeling miserable since supporting his family is what he has always done.

David Manifold echoed those remarks, and Tatyana and Yevgeniy Levin noted that they could not believe how much hardship the family had endured, both from negative publicity and the financial impact of Aleynikov's loss of employment. Lina Podles noted that Aleynikov was separated from his wife as a result of the negative publicity, humiliation and financial misfortunes the case brought on his family. She noted that Aleynikov lost his job, ruined his career, and now faces separation from his daughters and mother, who recently lost her husband to cancer.

48

The grave consequences Aleynikov has already suffered due to his conduct and the significant press attention this case has received serve as a sufficient general deterrent by informing the world that the Government will aggressively prosecute theft of trade secrets. There can be no question that those same consequences, including the loss of Aleynikov's job, the destruction of his reputation, the break-up of his family and the enormous toll this case has taken on him are also more than sufficient to specifically deter him from any such similar conduct in the future.

To be sure, the offense to which Aleynikov has pleaded guilty is a serious one that in some cases may require imprisonment to serve the purposes of section 3553(a)(2).[3] Here, however, we respectfully submit that a non-custodial term is the only sentence that is sufficient but not greater than necessary to accomplish the sentencing goals set forth in section 3553(a)(2).

D. A Non-Custodial Sentence Is Consistent With The Need To Avoid Sentencing Disparities.

USSG § 3553(a) requires the court to consider "the need to avoid unwarranted sentence disparities among defendants with similar records who have been found guilty of similar conduct." 18 U.S.C. § 3553(a)(6). Late Monday afternoon, Judge Rakoff sentenced the defendant in United States v. Agrawal, 10 Cr. 417 (JSR), to thirty-six months in prison. Like Aleynikov, Agrawal was charged with theft of trade secrets relating to a high-frequency trading program from his former employer. Unlike here, however, at Agrawal's trial the Government adduced substantial and uncontested evidence showing his intent to impose economic harm on SocGen and specifically quantifying that harm. As detailed below, the evidence against Agrawal supported the calculation of an applicable loss of $7 to $20 million — and an applicable

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[3]   Finally, Aleynikov is in need of no education or vocational training, medical care or other correctional treatment that might otherwise make a period of incarceration beneficial. 18 U.S.C. § 3553(a)(2)(D).

Sentencing Guidelines range of 78-97 months — in that case. Still, the court sentenced Agrawal

to 36 months, less than half the prison time the Government requested. Here, given the disparity

in proofs between the two cases, 18 U.S.C. § 3553(a)(6) would be served if Aleynikov were

sentenced to a term of probation.

The Presentence Report in Agrawal calculated the intended loss as $9.850 million and,

therefore, recommended an upward adjustment of 20 levels to his base offense level. United

States v. Agrawal, 10 Cr. 417 (JSR) (Feb. 28, 2011) (Tr. at 2-3). The Probation Department's

determination in Agrawal was appropriate for two reasons. First, there was unambiguous

evidence of Agrawal's intent to cause pecuniary harm to SocGen. The evidence at trial

demonstrated that Agrawal stole source code for two high-frequency trading programs, known as

DQS and ADP. The evidence further showed that Agrawal took the source code to Tower,

where he overtly planned to use the source code to compete with SocGen. One of the partners at

Tower testified at trial that he "sort of thought or hoped the strategy would make ten million."

Another partner testified that his "expectation was that if [the defendant's index arbitrage

strategy] worked it would make between 30 and 40 million," based partly on what the defendant

said. Moreover, the evidence suggested that this profit would come at the direct expense of

SocGen. The Defendant himself admitted in that case that SocGen would be harmed if Tower

replicated DQS and ADP, because they would take advantage of the same arbitrage opportunities

SocGen was targeting in the same manner. At sentencing, Judge Rakoff found these facts to

have been proven beyond a reasonable doubt. Id. at 6-7.

In this case, by contrast, there was no evidence that Aleynikov intended to cause

pecuniary harm to Goldman, or that he intended or expected Teza to compete in the same trading

space as Goldman. Indeed, every Government witness to testify on this topic made clear that any

50

argument that Goldman could suffer pecuniary loss from the theft of the source code taken by Aleynikov unless the thief were deploying its code and generating the same prices and trades as Goldman would be pure speculation. (12/1/10 Tr. at 347:21-348:5 (Walker); 12/1/10 Tr. at 479:16-480:9 (Schlesinger).)   Whereas Agrawal apparently stole high-frequency trading programs relating to a specific index-arbitrage strategy that could be used to compete against SocGen — and cut his employment deal with SocGen based on and tied to that theft — the source code Aleynikov is accused of having stolen was of a far more general nature. For example, the OBB module that the Government focused on at trial is related to communications with trading exchanges about what information is trading on the market, not a particular trading strategy. (12/1/10 Tr. at 481 (direct testimony of Adam Schlesinger).) The ability to cause pecuniary harm by implementing such a module is purely speculative and indirect, in stark contrast to the ability to cause such harm by attempting to implement a competitor's strategy, which Agrawal admitted doing. The intent to cause pecuniary harm, which was a matter thoroughly proven for purposes of Agrawal's sentencing, is a matter about which there is no proof whatsoever in Aleynikov's case. As the Government's own theory confirmed, Aleynikov downloaded aspects of Goldman's source code to assist him in creating a new trading system for Teza, whose trading strategy had yet to be defined. Moreover, the testimony at trial made clear that, unlike Agrawal, who shopped his services to Tower based on his ability to bring working code with him, Aleynikov was hired based entirely on his proven track record as a programmer. As Malyshev testified, if Aleynikov were even to have suggested employing Goldman's pre-existing code at Teza, he would have been fired on the spot. Stated simply, the Government's loss calculation information underscores the absence of any evidence that the source code Aleynikov took could or would have stolen market share from Goldman.

51

Moreover, whereas in <u>Agrawal</u> there was evidence of the development cost of the specific programs the defendant stole, there was no such evidence in this case. At trial in <u>Agrawal</u>, it was uncontested that the cost of developing DQS and ADP was $9.850 million. Applying application note 3(C)(ii) to USSG § 2B1.1, therefore, a 20-level increase was appropriate. The only evidence of that type here is that OBB, one of the modules included in Aleynikov's download, was written by one programmer, Navin Kumar, during his first three months at Goldman (12/7/10 Tr. at 1034 (direct testimony of Navin Kumar)). Even if it were assumed that Kumar spent the entire three-month period on that task (and there was no evidence to that effect), the loss amount could not exceed a quarter of his salary for that year (which also was not established at trial).

Aleynikov and Agrawal were both convicted of stealing computer source code to high-frequency trading systems. Whereas the Government adduced clear evidence that Agrawal was motivated by greed and that he intended a pecuniary loss to his former employer, however, it adduced no such evidence in the case of Aleynikov. Thus, the need to avoid sentencing disparities expressed in 18 U.S.C. § 3553(a)(6) would only be served by giving Aleynikov a far more lenient sentence than the 36-month term of imprisonment Agrawal received.

E. A Non-Custodial Sentence Is Consistent With The Need To Provide Restitution.

Section 3553(a) provides that another factor the sentencing court must consider is "the need to provide restitution to any victims of the offense." 18 U.S.C. § 3553(a)(7). Here, as the evidence showed and as the Probation Department determined, Aleynikov's offense conduct did not cause any direct monetary loss to the victim, Goldman. As a result, a non-custodial sentence would not undermine any need for restitution. Section 3553(a)(7) therefore supports imposition of such a sentence.

II.   **ALEYNIKOV IS NOT IN A POSITION TO PAY A FINE, AND THE DRAFT PSR CORRECTLY ADVISES THAT NO RESTITUTION IS APPROPRIATE IN THIS CASE.**

The draft PSR concluded that Aleynikov had the ability to pay a pecuniary penalty based on the value of his assets. The only asset of any consequence in Aleynikov's possession is his primary residence in North Caldwell, New Jersey. The draft PSR reflected the fair market of the residence as $1,140,000 based upon the purchase price Aleynikov paid in May 2009. This measure overstates Aleynikov's ability to pay a monetary penalty for four reasons. First, the estimated value of the residence has decreased substantially since the Aleynikov's purchased it. (Zillow.com estimates the market value of the home as $1,001,000 as of March 4, 2011.) Second, the residence is mortgaged in the amount of $756,000. Third, given the current state of the housing market, there is no reason to believe that the Aleynikovs could readily monetize any equity they have in the home. Fourth, given that the Aleynikovs are in divorce proceedings, Sergey Aleynikov could only reasonably expect to have half of any remaining equity available to pay a fine. In light of the declining fair market value of the property, Aleynikov's status as an unemployed, convicted felon, his lack of any steady income, his impending sentence and his pending divorce proceedings, it is unlikely that he could secure any additional credit against his equity in the property. For all these reasons, we respectfully submit that Aleynikov is not in a position to pay a pecuniary penalty.

As stated in the previous section, the draft PSR correctly states, and the Government concedes, that Aleynikov's offense conduct caused no actual loss to Goldman and, therefore, no restitution is necessary.

53

54

CONCLUSION

For the reasons set forth above, defendant Sergey Aleynikov respectfully requests that your Honor impose a non-custodial sentence upon him and refrain from ordering any fine or restitution.

Respectfully submitted,

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