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# Adoption Dynamics: An Update on the Impact of the Adoption and Safe Families Act

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## INTRODUCTION

In this paper, we analyze adoptions from foster care using data from the Multistate Foster Care Data Archive (the Archive). The goal is to understand what effect, if any, the federal Adoption and Safe Families Act (ASFA) has had on the proportion of children admitted to foster care that were later adopted and on the time needed to complete those adoptions.<sup>1</sup> Although ASFA addresses issues pertaining to placement prevention, reunification, and adoption, the specific provisions of ASFA that relate to the termination of parental rights and adoption are perhaps most central to the law's overarching purpose. These provisions include a tighter definition of *reasonable efforts*, a timeframe that clarifies when proceedings to terminate parental rights ought to commence, and incentives to states that increase the number of completed adoptions. They were designed, in part, to draw state attention to the backlog of children in foster care waiting to be adopted.

The study measures the impact of ASFA on adoptions in two ways. The first measure is the total proportion of children adopted from annual entry cohorts of children entering foster care. If ASFA influences the adoption process so as to increase the *likelihood* children will be adopted, then the proportion of children admitted who are eventually adopted should rise, all else being equal. The second measure considers how long children spend in foster care prior to their discharge to adoption. Again, if the provisions of ASFA have the intended effect, then the time spent in foster care by children who are adopted should decline. We measure the time to adoption using conditional probabilities and the hazard rate to account for the probability of adoption per unit time.

The analysis of ASFA effects is divided into two parts for the following reasons. First, although there has been a widely reported increase in the number of adoptions nationwide, changes in the number of adoptions cannot be used to draw direct conclusions about the likelihood of adoption or the speed of adoptions, the core measures of ASFA's impact on the adoption process. The number of completed adoptions in any given year is a function of foster care admission trends (e.g., cohort size and case mix) in prior years, the likelihood of adoption, and the time to adoption (Wulczyn, Kogan, & Dilts, 2001). By separately measuring the likelihood of adoption and the time to adoption, the effect of admission trends is isolated. Second, changes in the likelihood of

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<sup>1</sup> The specific focus is on public agency adoptions. Private adoptions and international adoptions are not included in the analysis.

adoption often coincide with changes in the time to adoption, but this need not be the case. Because the average time to adoption can decline even if the likelihood of adoption (the fraction of children admitted who are adopted) remains constant, understanding the impact of ASFA has to consider the underlying dynamics in two parts.

### Rationale and Background

The study intends to address the following issues. First, adoption is an important outcome in child welfare. This has always been true from the perspective of the individual children who are adopted. Increasingly, public officials are aware of its importance in the wider context of foster care trends. Overall, the best available multistate estimate suggests that over 20 percent of the children who enter foster care eventually leave because they have been adopted. Any set of policies and programs that influences adoption processes will have far-reaching effects, especially for the large number of children admitted to foster care before their first birthday (Wulczyn, Hislop, & Harden, 2002). Thus our major aim here is to better understand what those effects are and what to look for in the future.

Specifically, this analysis will examine effects of ASFA on the adoption process. Although ASFA addresses a broad range of child welfare issues, including placement prevention and reunification, arguably the most important provisions are those designed to influence the likelihood of adoption and the time needed to complete adoptions. Those provisions include incentives to states that increase the number of completed adoptions, a tighter definition of reasonable efforts, and a timeframe that clarifies when proceedings to terminate parental rights ought to commence. The latter provision stipulates that states should move to terminate parental rights in the event the child has been in foster care for 15 out of the most recent 22 months, provided certain other circumstances do not apply. The other circumstances include a consideration of the child's best interest, placement with a relative, or whether services needed by the family were not offered or made available.

In hindsight, the emphasis on adoption within ASFA can be attributed to renewed concerns about foster care drift that emerged in the mid-1990s, especially given the growing number of children on state caseloads waiting to be adopted. Between 1986 and 1995, the number of foster children nationwide surged by 72 percent, from 280,000 children to 483,000 (Committee on Ways and Means, 2000). That growth preceded a substantial increase in the number of children in foster

care whose permanency goal had been changed to adoption.<sup>2</sup> In the policy vernacular that was to develop, this population of waiting children became known as the adoption backlog, a term that was used to connote an increase in number that was larger than what might have been expected given the growing population.<sup>3</sup>

The available historical data, although providing only a limited view of adoption dynamics during the early to mid-1990s, indicate that an adoption backlog was likely developing. In 1990, the estimated number of waiting children was just below 20,000 nationwide, or about 5 percent of the total foster care population at that time. Five years later, at the end of 1994, the 38,000 children waiting to be adopted represented about 8 percent of the total foster care population. The perceived problem was compounded by the fact that the number of adoptions actually completed increased at a rate that appears to have been slower than the growth in the number of children waiting for adoption. Estimates put the number of completed adoptions in 1990 at 16,211 nationwide. By 1994, the number of adoptions had grown to 21,306 children, an increase of just 31 percent, as compared to an increase of 90 percent in the number of waiting children over the same period.<sup>4</sup>

To the extent that ASFA was directed at a slowdown in adoption that produced the adoption backlog, recent data would seem to suggest that attention might turn again to the number of children waiting to be adopted. Looking back in time, there were 1.2 children waiting to be adopted for every child who was adopted in 1990. Five years later, in 1994, the ratio was 1.8 waiting children for every adopted child. In 1999, even though the number of adoptions reached more than 46,000, the data indicate that there were 127,000 children waiting to be adopted, a ratio of 2.7 waiting children for each adoption.<sup>5</sup> Moreover, waiting children accounted for about 20 percent of all the children in foster care in 2000.

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<sup>2</sup> States define children waiting to be adopted in different ways. In some states, children waiting to be adopted have had the permanency goal switched from reunification to adoption. In other states, children waiting to be adopted are children whose parents have had their rights terminated.

<sup>3</sup> The emphasis on the adoption backlog came from a number of sources, including individual states. However, the W.K. Kellogg Foundation, with its Families for Kids Initiative, brought attention to the backlog issue that it might not have otherwise received. For instance, South Carolina coined the phrase “Backlog Blitz” to describe efforts funded with a Families for Kids grant. According to the South Carolina Department of Social Services, “[T]his effort concentrated attention on children whose permanent plan was adoption and attempted to accelerate their movement through the child welfare system.”

<<http://www.state.sc.us/dss/adoption>> (Accessed in July 2004).

<sup>4</sup> U.S. Department of Health and Human Services, Children’s Bureau, “Analysis of State Child Welfare Data: VCIS Survey Data from 1990 through 1994.”

<<http://www.acf.dhhs.gov/programs/cb/dis/vcis/maintoc.htm>> (Accessed in July 2004).

<sup>5</sup> U.S. Department of Health and Human Services, Children’s Bureau, “The AFCARS Report.”

<<http://www.acf.dhhs.gov/programs/cb/publications/afcars/june2001.htm>> (Accessed in July 2004).

Although these data ought to raise concerns about the impact of ASFA on the adoption process, the fact is that raw counts of children waiting to be adopted provide few if any insights into the underlying dynamics. More to the point, a growing backlog should not be used to infer anything about the impact of ASFA on the time to adoption or the likelihood of adoption. Only more sensitive measures and analysis can provide those insights.

The second purpose of this study is to expand the statistical framework policy makers use to understand the interplay between adoption policy and foster care utilization. To date, most of the academic research has focused on adoptions within individual states (Barth, 1997; Kemp & Bodonyi, 2000; McDonald, Berry, Patterson, & Scott, 2000; McMurtry & Lie, 1992) using single cohorts. Collectively, these studies are important because they relate the characteristics of children to the adoption process. For example, both Barth (1997) and Kapp & McDonald (2001) found that adoptions involving African American children proceed more slowly than adoptions involving white children. Age at admission has also been studied. Young children are more likely to be adopted and their adoptions take less time to complete than adoptions involving older children. Similarly, Wulczyn & Hislop (2002) found that children from primary urban areas are more likely to exit foster care to an adoptive home, but that doing so takes longer than it does in other parts of the states included in the study. What these studies do not address is perhaps the most fundamental question from a policy perspective: Has the time to adoption changed over time in a manner that is consistent with policies that were implemented during the same timeframe? One of the few recent exceptions to this limitation is the study of adoption trends in Kansas by McDonald and colleagues (2000). Their study examined adoptions involving members of three successive cohorts to determine whether the adoption process had been affected by state reforms undertaken in the mid-1990s. Their results indicate that the time to adoption declined in response to changes in the way services are organized and funded.

The relative paucity of comparative historical data is particularly relevant in the present, post-ASFA context. At a national level, Congress has not had reliable estimates of the number of children adopted as a fraction of all children admitted. In the years just prior to ASFA, Congress knew the estimated number of adoptions from the Voluntary Cooperative Information System (VCIS), but little else pertaining to the underlying adoption process and whether that process was slowing down, as many observers suspected but could not document.<sup>6</sup> The reason Congress did

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<sup>6</sup> The only national estimates from the early 1990s come from the VCIS data. VCIS data had several known problems, including year-to-year changes in the number of reporting states and differences in the

not have that information was because information at that level of detail did not yet exist, except in a very few states.

More sophisticated longitudinal data are available today; however, there is relatively little experience interpreting adoption trends using a long historical lens. One reason for this is the average time needed to complete adoptions relative to reunification and other exits. As we demonstrate in this article, the adoption process takes between 5 and 10 years to observe fully. This means that it will take a relatively long time to know whether the adoption process changes in response to specific policy or programmatic initiatives. The other reason is the fact that during the five or more years needed to observe the adoption process, cohort members will be subjected to a number of influences that could alter their foster care experience. To isolate the influence of a policy such as ASFA from all the other relevant influences requires that each cohort be examined as its members pass through historical periods characterized by differing social, economic and policy environments. We hope to illustrate how that analysis might be undertaken and then used to understand adoption dynamics over the course of more than a decade.

### Research Questions

Since ASFA was passed, there has been a sharp increase in the number of adoptions reported. Nationwide, adoptions increased from 25,693 in 1995 to 46,072 in 1999.<sup>7</sup> In October of 2001, the Department of Health and Human Services announced that the number of adoptions in 2000 reached nearly 50,000, an increase of more than 10 percent over the previous year.<sup>8</sup> However, it is difficult to judge from these numbers alone whether the ASFA provisions designed to stimulate the adoption process have had the intended effect. Because the foster care population grew substantially in the early part of the decade, the larger number of adoptions toward the end of the decade may be an artifact of cohort size rather than changes in either the likelihood of adoption or the time it takes to complete adoptions for children who cannot go home (Wulczyn et al., 2001).

In this paper, we offer a more comprehensive picture of how adoptions have changed during the period prior to and after ASFA became law. To frame the analysis, we begin with the assertion that ASFA was designed to have two primary effects on adoption. First, the language of ASFA suggests that the likelihood of adoption will change as states implement certain provisions designed to address children who are at risk of long-term foster care (the adoption backlog).

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way participating states define critical variables. Thus, the VCIS estimates are quite unstable. For a discussion of VCIS data as it pertains to adoption, see Maza (1999)

7 <http://www.acf.dhhs.gov/programs/cb/dis/tables/prior/index.htm>

8 <http://www.acf.dhhs.gov/news/press/2001/adoption.html>

Those provisions include the judicial review at 12 months rather than 18, the 15/22-month standard that applies to the termination of parental rights, and new limitations on the use of long-term foster care as a permanency planning option. All things being equal, these changes should shorten the time before children exit foster care by way of adoption, presumably because key decisions are moved to a point earlier in the child's foster care career. Second, with the focus on the need for placement and the termination of parental rights, we expect that those same provisions will cause the likelihood of adoption to rise.

Using data from seven states included in the Multistate Foster Care Data Archive, we address the following questions:

- Has there been an increase, since ASFA, in the percentage of foster care placements that end in adoption?
- Has there been an observable decline in the time to adoption for those children in care and likely affected by the ASFA provisions?

The specific measures used to address these questions are described in the section that follows.

## METHODOLOGY

The data used for these analyses are from the Multistate Foster Care Data Archive maintained by Chapin Hall Center for Children at the University of Chicago.<sup>9</sup> A database constructed from information drawn directly from the administrative databases that state agencies use to manage and operate their child welfare programs, the Archive currently maintains data from over a dozen states, including the placement records for about 1.67 million children in foster care. For the analyses presented here, we selected data from seven Archive states (Alabama, Illinois, Michigan, Missouri, New Jersey, New York, Ohio) because their data encompass all children who first entered substitute care between 1990 and 2002 and provide information on exit destinations for children who leave care.<sup>10</sup>

For each child whose placement is recorded as part of the Archive, the following pieces of information are maintained: type of placement, date of entry, date of exit, and exit destination, as well as the child's gender, age, race/ethnicity, and county of residence. Using this information,

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<sup>9</sup> For a more complete description of the Multistate Foster Care Data Archive, see Wulczyn, Hislop, & Goerge (2000).

<sup>10</sup> These states account for over one-third of the children in foster care nationwide in 2000. Although the states in the analysis are diverse, they are not necessarily representative of the states not included. Thus, a more representative sample of states might yield slightly different results.



the data is processed to identify child spells that consist of a continuous period in care. A single spell may consist of multiple placements and a child may have more than one spell in care. Throughout this article we use the term *foster care* to refer to traditional family foster care, kinship care, and various forms of congregate care.

To enhance the comparability of Archive data across states, the following three modifications are made to the calculation of child spells:

- Spells in care that last fewer than 5 days are excluded from analyses. These shorter spells, which are often court-vacated protective custodies, are reported only in certain states. Including these spells in analyses could distort duration comparisons.
- When spells in care were terminated for reasons other than reunification or adoption, and reentry to care occurred within one week, the gap is bridged and the two spells are treated as a single spell. This was done to account for local differences in reporting sensitivity.
- Spells in the Archive are “terminated” on the child’s twenty-first birthday regardless of whether the state’s administrative data indicate an exit from care. This was done to account for differing state policies regarding the participation of older adolescents in substitute care.

## Measures

As noted, we selected two measures to assess the impact ASFA has had on the adoptions process. The first measure is the total percentage of children adopted from annual entry cohorts, and the second, designed to detect changes in the time to adoption, is the likelihood of adoption per unit time. The goal was to select measures that would indicate whether changes are taking place in the foster care system that increase children’s chances of being adopted and that decrease the time it takes for the adoption to take place.

Both measures are based on entry cohorts. We follow 13 successive entry cohorts from 1990 through 2002, using a cohort sequential design (Loeber & Farrington, 1994; Schaie, 1986). The members of each entry cohort consist of all children admitted to foster care for the first time during the corresponding calendar year. Children are followed until they exit foster care. Exit destinations include return to parents, discharge to relative, adoption, and all other exits. The

population of our analysis includes only children in their first spells. A child may reenter the foster care system and then be adopted (i.e., at the end of a second or a subsequent placement spell). Those adoptions from later spells are not counted into the total number of children adopted from the original entry cohort. Therefore, the total number of adoptions reported for each entry cohort should be fewer than the actual number of adoptions. The rationale for excluding later spells from the analysis is to avoid methodological complexities in computing statistical estimates and to facilitate interpretation of results. Future analysis of the data will include adoptions from subsequent spells.

### *The Likelihood of Adoption*

The most fundamental measure of adoption and the efficacy of the underlying adoption process is the *likelihood of adoption*, which measures how many children are adopted for every 100 hundred admissions. Policies that promote adoption are generally intended to increase the likelihood children will exit to adoption, provided they cannot be returned home. If this happens, then the likelihood of adoption recorded for successive cohorts of children should rise, provided no other countervailing factors are at work.

We present data for 13 cohorts, starting with children admitted for the first time in 1990. For each cohort, we provide three summaries. First, we report the total number of children adopted from the initial placement spell as a fraction of the total number of children admitted for the first time by year of admission. Second, we report the total number of children adopted from first spell by the year of admission and the year of adoption. We take this approach because the data available for children admitted later in the decade (e.g., 2000, 2001, and 2002) are limited inasmuch as the tracking data is complete through December 31, 2002. Displaying the data by year of admission and year of adoption makes it possible to compare the unfolding adoption process for each cohort at comparable moments in time. In this way, we can highlight the basic distribution that links adoption and placement duration. Finally, we summarize the data using the cumulative percentage of adoption. These data standardize the number of adoptions using the number of admissions and provide a slightly more sensitive measure of whether the adoption process has changed.

### *Likelihood of Adoption – Conditional Probability*

The second objective addressed by ASFA is shortening the time to adoption. The time to adoption is typically summarized as an average number of days to exit. The specific dates used to

demarcate the beginning and end of the process differ from one study to another. Some researchers (McDonald et al. 2000) have used the time between termination of parental rights and placement into an adoptive placement. Other researchers consider the full time span, from date of initial entry until the child’s adoption is finalized and the child is discharged from foster care. This approach does not take into account the fact that children may spend some portion of their time in foster care with adoptive parents. Other approaches are possible. In this study, we use the total time between admission and exit from foster care.

To measure the time to adoption, we borrow from event history analysis and summarize the time to adoption as the conditional probability of exit per unit time. The conditional probability of adoption measures a child’s likelihood of adoption during the next time interval, given that they are still in care at the beginning of the interval. The conditional probability of adoption in a competing risk framework is:

$$p_j = x_j / (n_j - (c_j / 2))$$

where

- $p_j$  is the probability of being adopted during the  $j$ th interval given that child was still in care at the start of the interval;
- $x_j$  is the number of adoptions occurring during the  $j$ th interval;
- $n_j$  is the number of children still in care at the beginning of the  $j$ th interval;
- $c_j$  is the number of children who are censored (exit to destinations other than adoption – the competing risks) during the interval.

We do not report the average time to adoption, a more conventional measure, for two reasons. The conditional probability is readily interpreted because it is directly related to the average length of time in care. All else being equal, an increase in the conditional probability of adoption means the time to adoption went down; a decrease is consistent with longer lengths of stay. More important, because it can be estimated separately for each year the members of an admission cohort are eligible for adoption, the conditional probability provides additional information. The average time in care is limited in that it provides only a single, undifferentiated summary of the underlying survival distribution. Because the aim is to understand how members of each entry cohort were affected by ASFA’s tighter rules and regulations, the analysis examines specifically the children from those cohorts still in care when ASFA was implemented. Then, the “period-specific adoption probabilities” can be compared across cohorts to observe whether “exposure” to ASFA influenced the probability of exit relative to other cohorts at similar points in time, but not

within the post-ASFA period. The use of period-specific probabilities makes these comparisons possible.

### *Likelihood of Adoption – Proportional Hazard Models*

The conditional probability is unadjusted. Therefore, changes in the conditional probability of exit over time can be a reflection of case mix changes from one cohort of children to the next rather than changes in the underlying adoption process. To account for changes in the time to adoption after controlling for child characteristics such as age and race/ethnicity, we extended the analysis using the Cox proportional hazards model. The proportional hazard model evaluates the conditional probability per unit time given a set of independent variables that are related to the probability of exit. The hazard model developed for this article controls for age at admission, care type, urbanicity, and year of admission. The effects are measured as hazard (relative risk) ratios that evaluate how the “risk of exit” is linked to the attributes of children. For each independent variable in the model, one category is designated as the standard against which the risk ratios for other categories are compared. With respect to entry cohorts, we compared each subsequent cohort with the experiences of children admitted in 1990. If the risk ratio for any given entry cohort is above one (relative to 1990), it means that the risk of exit to adoption per unit time was higher for the children who entered in the corresponding year. In this way, we test for statistically significant changes in the likelihood of adoption over time with demographic attributes of the children controlled. However, this paper will not evaluate how child characteristics are related to exits from care.

## **RESULTS**

In this section, we report findings that pertain to the likelihood and time to adoption for each admission cohort between 1990 and 2002. The findings are presented in four parts. The first three focus specifically on the adoption process without taking child characteristics into account. The fourth part of the analysis studies the adoption dynamics by taking into consideration the characteristics of children admitted to foster care.

### *Probability of adoption*

The data in Table 1 indicate that through the end of calendar year 2002, 17.9 percent of the children admitted in 1990 exited foster care from their initial placement spell because they were adopted. For each year from 1991 to 1994, the likelihood of adoption is higher than reported for the previous year, even though the observation period was shorter. Completed adoptions from

first placement spells for all these cohorts will continue to rise since a number of children from those admission cohorts were still in their first spell of care on December 31, 2002. However, because the residual populations for the later years are larger, the increase should be higher for the later cohorts than it is for earlier cohorts. If that is true, then these data suggest that for children admitted early in the decade there was a slight increase in the probability of adoption for later cohorts compared with 1990. One question to answer is how, if at all, ASFA may have influenced the adoption of children admitted in the early 1990s. This question is examined later.

After 1994, the likelihood of adoption appears to decline year after year, from 21.4 percent in 1994 to 20.5 percent in 1997. Of the children admitted in 1998, only 16.5 percent exited to adoption from their initial spell, below that of 1990. However, these data clearly are censored – the observation period is too short and the number of children remaining in their first spell of placement is too large to draw any inferences about the probability of adoption based on these data alone. More important, from the standpoint of understanding the impact of ASFA on the overall probability of adoption, the data indicate that insufficient time has passed to determine whether changes consistent with the intent of ASFA have occurred. This is especially true for the 1998 and later cohorts – the first full post-ASFA cohorts. The data indicate that for children entering placement in and after 1998, fewer than 16 percent of the children admitted have been adopted.

Table 1  
Number of Admissions and Percent Discharged  
to Adoption by Year of Admission

Year of Admission	Number of Admissions	Percent Discharged to Adoption as of 12/31/02 (%)
1990	49,283	17.9
1991	49,177	19.6
1992	46,451	20.6
1993	45,692	21.3
1994	49,810	21.4
1995	45,236	20.7
1996	49,139	20.7
1997	48,604	20.5
1998	48,519	16.5
1999	45,783	12.7
2000	44,303	7.7
2001	45,603	3.5
2002	44,074	0.8

Although the percentage of adoptions is a relatively straightforward measure, the data in Table 1 highlight its limitations. As presented, the data do not shed any light on the flow of adoptions over the life course of each cohort. As we know, adoptions shortly after admission are few, and are expected to increase after the first few years and then decline. The percentage of adoption, as a summary measure, does not provide this level of detail. Moreover, we cannot pinpoint what role ASFA has played in the life course of the cohorts. Given that many of these children were adopted before ASFA was passed, the data need to be studied for both pre- and post-ASFA effects.

In Table 2, we present cohort-specific data, starting with the number of adoptions by the number of years since admission. These data provide an overall view of the specific flow of adoptions in relation to the year of admission. Children who were adopted in the same year they were admitted to foster care are recorded as having left in the first year since admission. Children who left care between 1 and 2 years after admission are recorded as having left during the second year since admission, and so on.

Table 2  
Number of Adoptions by Elapsed Time (in years) Since Admission

Year of Entry	Years Since Admissions												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1990	235	654	964	1256	1292	1233	831	753	616	488	236	154	86
1991	201	705	966	1346	1562	1238	1054	1038	779	366	248	160	
1992	205	681	909	1464	1578	1411	1257	1046	491	303	213		
1993	198	632	1024	1531	1754	1683	1429	771	451	267			
1994	181	634	1063	1690	2371	2297	1218	778	415				
1995	273	650	1007	2148	2385	1531	884	503					
1996	371	871	1648	2762	2254	1378	881						
1997	1027	1303	1977	2528	1943	1191							
1998	280	1042	2265	2660	1738								
1999	248	1053	2249	2266									
2000	298	1107	1990										
2001	433	1173											
2002	340												

The shaded cells in correspond to children who were adopted during years when ASFA was in effect.

Reading across the rows of Table 2, the data reveal the following. Each year, a relatively small number of children admitted to foster care are adopted quickly, within 1 year of admission.

Following the admission year, the number of adoptions from initial placement spells increases each year through the fifth year after admission for the 1990 to 1995 cohorts. From that point forward, the number of adoptions from a given cohort drops, giving the distribution of completed adoptions for individual entry cohorts a left-skewed normal distribution, with a peak at 5 years. However, for the 1996 and later cohorts, the number of adoptions peaked in the fourth year. This emerging trend is evident for each cohort from 1996 through 1998, the only cohorts of children that have been in foster care long enough to observe 5 full years of adoption activity. Read down the rows, the number of adoptions for each year after admission (before the fifth year) is also larger for the later cohorts than earlier cohorts. For example, in the third year after admission, only about 1,000 children were adopted for each of the 1995 and earlier cohorts; however, the 1996 cohort has more than 1,600 adoptions in its third year, and each of the later cohorts have over 1,990 adoptions. This shift in the time of adoption peaks and in the number of adoptions constitutes preliminary evidence that the likelihood and speed of adoption has increased for children from the later entry cohorts.

The shaded cells in Table 2 correspond to children who were adopted during years when ASFA was in effect. We selected 1998 as the year states began to implement ASFA's requirements because the legislation did not become law until November of 1997. The shading pattern indicates that each cohort from 1990 forward had members whose adoption could have been influenced by ASFA. As of the end of 2002, 66 percent of all adoptions ( $n=97,063$ ) from initial placement spells for the 13 entry cohorts occurred after ASFA became effective. We have noted above that for each year of its life cycle, later cohorts have more children adopted than earlier cohorts. There is a clear difference between the shaded adoption numbers and the un-shaded ones. For example, during the third year after admission, the 1996 cohort have 641 more adoptions than the 1995 cohort. Because the third year for the 1996 cohort falls on 1998, the first year when ASFA was in effect, it indicates that ASFA provisions may have contributed to the increase in the number of adoptions.<sup>11</sup> Of course, the problem with this conclusion has to do with fact that cohort size is not taken into account. It may well be the case that the number of adoptions is increasing because the size of the admission cohorts is increasing. In Table 1, the data suggest that the 1996 through 1998 cohorts were on average larger than the 1992 and 1993

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<sup>11</sup> From a policy perspective, cohort size in relation to the number of adoptions is important because ASFA rewards states for increasing the number of adoptions. However, because the number of adoptions has as much if not more to do with cohort size as with the speed of the process, the number of adoptions cannot be used to assess directly whether the provisions of ASFA had their intended affect.

cohorts. In the following sections, changes in the likelihood of adoption will become clear as the cohort size is taken into account.

*Cumulative percent adopted*

In Table 3, the data from Table 2 are presented as the cumulative percent adopted by year of admission and years since admission. These percentages adjust for cohort size and provide a somewhat better way to track changes in the likelihood of adoption from one cohort to the next. The data do suggest a small, but perceptible shift in the likelihood of adoption. The easiest way to observe the effect is to compare adoptions in the first year for each of the thirteen cohorts, and then compare cohorts at similar points in their evolution through time. In the early part of the decade, one-half of 1 percent of the children admitted were adopted in the first year. Between 1995 and 1997, first-year adoptions increased from 0.6 to 2.1 percent. The percent adopted in the first year for 1998 and 1999 dropped back to half a percent and then increased to 0.9 percent in 2001.

Table 3  
Cumulative Percent Adopted by Year of Admission and Years Since Admission  
AL, IL, MI, MO, NJ, NY, OH, WI

Year of Entry	No. of Admissions	Years Since Admission												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1990	49,283	0.5%	1.8%	3.8%	6.3%	8.9%	11.4%	13.1%	14.6%	15.9%	16.9%	17.4%	17.7%	17.9
1991	49,177	0.4	1.8	3.8	6.5	9.7	12.2	14.4	16.5	18.1	18.8	19.3	19.6	
1992	46,451	0.4	1.9	3.9	7.0	10.4	13.5	16.2	18.4	19.5	20.1	20.6		
1993	45,692	0.4	1.8	4.1	7.4	11.2	14.9	18.1	19.7	20.7	21.3			
1994	49,810	0.4	1.6	3.8	7.2	11.9	16.5	19.0	20.5	21.4				
1995	45,236	0.6	2.0	4.3	9.0	14.3	17.7	19.6	20.7					
1996	49,139	0.8	2.5	5.9	11.5	16.1	18.9	20.7						
1997	48,604	2.1	4.8	8.9	14.1	18.1	20.5							
1998	48,519	0.6	2.7	7.4	12.9	16.5								
1999	45,783	0.5	2.8	7.8	12.7									
2000	44,303	0.7	3.2	7.7										
2001	45,603	0.9	3.5											
2002	44,074	0.8												

The shaded cells in correspond to children who were adopted during years when ASFA was in effect.

A similar shift is observable through time. For the 1990 cohort, 8.9 percent of the children admitted were adopted within 5 years after entry. The comparable figure for each successive



cohort thereafter was higher. In 1995, the percentage was 14.3; by 1997, the percentage was 18.1, over 9 percent higher than 1990. The likelihood of adoption for later cohorts is obviously higher than earlier cohorts. Table 3 also suggests that the adoption process has accelerated with each successive entry cohort. For the 1990 entry cohort, the adoption rate was still below 20 percent by the end of 2002, 13 years after their admission. It took significantly shorter periods of time to achieve a 20 percent adoption rate for later cohorts, 8 years for the 1994 and 1995 cohorts and about 7 years for the 1996 and 1997 cohorts. Some of that acceleration can obviously be attributed to children who were adopted after ASFA became law (i.e., children admitted in 1995 who were adopted in 1998 and later). However, the data also indicate that a shift was already underway when ASFA was passed. On the one hand, larger-than-expected changes linked to the post-ASFA adoptions are one indication of the impact of ASFA. On the other hand, changes in the cumulative probability of adoption that predate ASFA mean that other factors were at work.

#### *Conditional probability of adoption*

In Table 4, we take one additional step and calculate the conditional probability of adoption. The percentages in Tables 1, 2, and 3 are based on the number of adoptions as a fraction of the children admitted to their respective cohorts. Table 1 compresses the time dimension; in Tables 2 and 3, the distribution is displayed with time taken into account. The data in Table 4 differ in that the conditional probability adjusts the risk set to include only those children still in care at the start of each year, rather than the full population. Earlier, we referred to these as period-specific probabilities. The data also reflect a “competing risk” framework in that all other exit types are treated as censored observations for purposes of calculating the conditional probability of adoption. The conditional probability of adoption pinpoints changes in the likelihood of adoption as period effects more precisely.<sup>12</sup>

From these data, three observations can be made about the dynamics of adoption. First, there is clearly no slowdown in the speed of adoption for children admitted in the early 1990s. For the 1994 and earlier cohorts, the adoption process followed the same pattern of increasing from a probability of 0.01 in the first year after admission to 0.07 in the third year. Further down in their life cycle, each of these cohorts has a higher probability of adoption than the prior cohort for the same year after admission. These findings contradict the widespread perception that there was a slowdown in the process of adoption in the early 1990s that led to the adoption backlog.

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<sup>12</sup> The fact that these are conditional probabilities means that other exit types influence the period-specific probability of adoption. For example, if fewer children are reunified, more children will be in care at the start of the next time interval. This could lower the conditional probability of adoption.

Table 4  
 Conditional Probability of Adoption by Entry Cohort  
 and Years Since Admission  
 AL, IL, MI, MO, NJ, NY, OH

Year of Entry	Years Since Admission												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1990	0.01	0.04	0.07	0.10	0.14	0.14	0.14	0.17	0.20	0.17	0.13	0.14	0.09
1991	0.01	0.03	0.07	0.11	0.14	0.14	0.18	0.23	0.19	0.18	0.15	0.14	
1992	0.01	0.03	0.07	0.12	0.15	0.19	0.24	0.21	0.18	0.16	0.17		
1993	0.01	0.04	0.08	0.13	0.19	0.23	0.25	0.21	0.18	0.16			
1994	0.01	0.03	0.07	0.14	0.22	0.24	0.20	0.20	0.15				
1995	0.02	0.03	0.10	0.20	0.25	0.23	0.21	0.18					
1996	0.02	0.04	0.13	0.22	0.22	0.21	0.20						
1997	0.05	0.07	0.16	0.23	0.22	0.21							
1998	0.02	0.08	0.18	0.23	0.20								
1999	0.02	0.08	0.19	0.20									
2000	0.02	0.08	0.16										
2001	0.03	0.06											
2002	0.02												

The shaded cells in correspond to children who were adopted during years when ASFA was in effect.

Second, examining the pattern of variation in the conditional probabilities in Table 4 with particular reference to the point in history when each cohort reaches the post-ASFA period (the shaded area), we find that the probability of adoption started to increase for each cohort even before ASFA was adopted in 1998. For example, from 1996 to 1997, the conditional probability increased from 0.14 to 0.17 for children admitted in 1990 who still remain in care. Similarly, reading down the row of Table 4, even in the pre-ASFA period, the probability of adoption was higher for children of later cohorts than those of earlier cohorts in the same year after admission. For example, in their fifth year after admission, children who were admitted in 1992 and stayed in foster care during that year (i.e., 1996) had a 0.15 probability of being adopted; and children of the 1993 cohort in their fifth year after admission (1997) had a higher probability of adoption of 0.19. Obviously these increases were caused not by ASFA, but by state and other federal efforts undertaken in the pre-ASFA years.

Third, we also noted a clear increase in the conditional probability of adoption from the pre-ASFA to post-ASFA periods. Although the probability of adoption continued to rise for each

entry cohort, it did not reach its peak probability until 1998 or 1999, when ASFA was in effect. For children admitted in 1990, 1991, and 1992, the conditional probability of adoption all peaked in 1998 at over 0.20. For the 1993, 1994, and 1995 cohorts, the conditional probability of adoption peaked at 0.24-0.25 in 1999, in the seventh, sixth, and fifth year respectively following admission. The fact that for these entry cohorts their peak probability of adoption occurred within 1 or 2 years of the passage of ASFA indicates that ASFA may have contributed to an increase in the likelihood of adoption. That the peak probability occurs sooner in the life cycle of later cohorts is further evidence that ASFA provisions may have reduced the time from admission to adoption. Our conclusion is only tentative because we still cannot say whether the increase is only a continuation of the pre-ASFA trend or can be solely attributed to the impact of ASFA. This puzzle could not be easily solved unless we had a case-control design in which certain children were not under the influence of ASFA provisions. It is most plausible that the passage of ASFA has enhanced the effect of the state policies and practices intended to speed up the adoption process.

#### *Proportional hazards model*

The final piece of analysis considers the findings in Table 4 using a multivariate, proportional hazard model to judge again whether there is evidence to suggest that adoptions have accelerated in recent years after controlling for the attributes of children. The first concern is the time trend that describes changes in the likelihood of adoption per unit time. Figure 1 shows the results from three separate proportional hazard models. One model examines all exits; the second model considers only reunification; and the third model evaluates only adoptions. In each model, the probability of exit for each entry cohort is compared with the experiences of the 1990 cohort, the base year, after controlling for age, race, urbanicity, primary type of care, and state of residence. The statistics reported in Figure 1 is the relative hazard of exit, and a rate above 1 implies faster movement.<sup>13</sup>

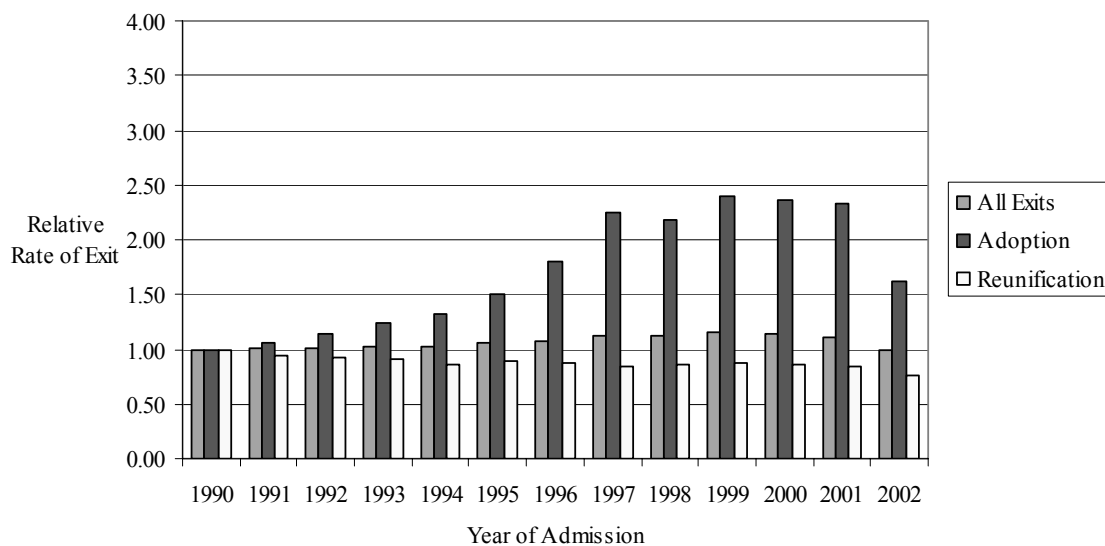
With respect to all exits from first spells, the data suggest a relatively constant rate of exit when each subsequent cohort is compared with the 1990 group. More striking differences are observed for adoption exits and to a lesser degree reunification exits. Figure 1 indicates a slight but

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<sup>13</sup> It is important to stress that the comparisons made in Figure 1 are across time for each exit type. For example, the graph indicates that the adoptions happened much faster per unit time for children admitted in 1997 when compared with what happened to the children admitted in 1990. The graph should *not* be interpreted to mean that in 1997 or for the 1997 entry cohort, adoptions happened much faster than reunification.

perceptible decline in the likelihood of reunification per unit time over the years from 1990 through 2002. Adoption exits provide the most striking profile. The likelihood of exit through adoption for each of the later cohorts was greater relative to 1990. For children admitted between 1997 and 2001, the hazard of adoption was more than twice the hazard of adoption observed for the 1990 entry cohort. The largest difference in the hazard of adoption involved the children admitted to foster care in 1999: they were 2.4 times more likely to be adopted per unit time than children admitted in 1990, after controlling for their demographic characteristics.<sup>14</sup>

Figure 1  
Relative Rate of Exit to Adoption by Exit Destination and Year of Admission



The data in Figure 1 and Table 4 together offer the most complete explanation of adoption dynamics relative to ASFA. It appears from Figure 1 that children admitted in 1991 had a slightly elevated chance of adoption overall when compared with 1990. The data from Table 4 suggest that this slight advantage is likely attributable to a small shift in the period-specific probabilities observed for the 1991 cohort that started in the pre-ASFA years (fifth through seventh year) and continued into the post-ASFA period. Specifically, the conditional probabilities for the 1990 and 1991 cohorts are nearly identical through the sixth year (see Table 4). Thereafter, in their seventh and eighth year in foster care, the 1991 children were more likely to exit to adoption than were the 1990 children. For the 1991 cohort, the eighth year was 1998, the first year of ASFA, so its higher probability of adoption can partly be attributed to ASFA. A

<sup>14</sup> Please note that the hazard ratios for the later entry cohorts (i.e., 2000 through 2002) are subject to substantial change as more data become available.

similar pattern describes the dynamics underlying the improved performance observed for the 1992, 1993, and 1994 cohorts. For example, in 1994, the probability of adoption during the first 3 years is identical to the observed probabilities that defined the 1990 cohort. In the fourth year, just before the ASFA effect should be observed, the conditional probability stands at 0.14 for the 1994 cohort and just 0.10 for the 1990 group; in the fifth year when the 1994 cohort entered the first year of ASFA, its conditional probability jumped to .22 compared to .14 of the 1990 cohort. The data in Figure 1 further suggest that the exit rates involving children admitted to foster care since ASFA became law (the 1998 and later cohorts) have remained at a high level. Relative to 1990, the children admitted in 1998 and later were moving through the adoption process twice as fast, or put it another way, over twice as many children per unit of time are adopted as in 1990.<sup>15</sup> Of course, we cannot claim that the higher relative rate of exit through adoption for the 1998 and later cohorts is completely due to ASFA since the exit rate has been increasing for successive cohorts before 1998.

#### **SUMMARY AND DISCUSSION**

The findings suggest the following about the adoption process for children admitted to their first spells between 1990 and 2002. The data indicate that the probability of adoption increased significantly between 1990 and 1997, the year before ASFA was passed. Specifically, for every 100 children admitted in 1990, there were roughly 18 adoptions by the end of 2002. The comparable figure for children admitted in 1994 was 21. The likelihood of adoption for children admitted after 1994 declined somewhat, however these data are right-censored in that many of the children from those cohorts were still in care when the data were assembled. An update of the database today would reveal relatively large increases in the likelihood of adoption for post-1994 cohorts as the data for censored observations are completed. Even for the pre-1994 cohorts, we can expect more adoptions. Taken together, the data suggest that the likelihood of adoption increased during 1990s.

What is striking about these data is that they run counter to the prevailing wisdom leading up to the passage of ASFA. It was thought that adoptions were slowing down (i.e., the likelihood of adoption was declining and the time needed to complete adoptions was going up) as evidenced by the growing number of children in the adoption backlog. Since the data suggest otherwise, we used a cohort sequential design to illuminate the underlying adoption process and to pinpoint

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<sup>15</sup> The relative drop of the 2002 rate from that of 2001 may be contributed to the relatively short time duration the children have been in care.

when the adoption process was changing relative to the policy changes introduced by ASFA (the period effect) and the time children were in foster care.

These data indicate that the number of adoptions is not evenly distributed throughout the life cycle of an entry cohort. From a slower start, the number of adoptions increases each year until it peaks in the fourth or fifth year, and then starts to decline. The general pattern is understandable because reunification has to be ruled out before adoption becomes possible. In the year after admission, children tend to be reunified with families (Wulczyn, Brunner and Goerge, 2000). As time passes, alternative discharge options (i.e., adoptions) become more important. Although this trend was generally true across all of the cohorts we observed, there was a shift in the underlying pattern. For early cohorts (1990-1995), the number of children adopted peaked in the fifth year after admission; for children admitted in 1996 and later, the number of adoptions in each year after admission peaked in the fourth year. An examination of the cumulative percentage of children adopted from each entry cohort indicates that the percentage of children being adopted from each cohort is higher for later cohorts than earlier cohorts for the same duration after admission. A shift of this sort is consistent with changes in the underlying adoption process.

To better understand the impact of ASFA on the likelihood of adoption, we computed the period-specific probability of adoption. Representing the likelihood of adoption for children who enter the next period still in care, the period-specific probability provides the richest insights, especially when paired with the results from the proportional hazards model. As we noted, ASFA was designed to address the perceived slowdown in the adoption process that allegedly contributed to a pronounced adoption backlog that emerged in the mid-1990s. However, we found that the period-specific probability of adoption for children admitted from 1990 to 1994 followed a stable pattern, increasing from 0.01 in the first year after admission to 0.07 in the third year. Further into the life cycle of each cohort, the conditional probability of adoption increased with each successive, pre-ASFA cohort. For example, in the fourth year after admission, the probability of adoption was 0.10, 0.11, 0.12, and 0.13 for the 1990, 1991, 1992 and 1993 cohorts respectively. Obviously the diagnosis for the problem of the backlog was misplaced. Instead of a slowdown in the pace of adoption, an increase in admissions in the late 1980s and early 1990s is a more likely explanation for the backlog, at least as far as the states in this study are concerned.

The data do point to changes in the likelihood of adoption that coincide with the implementation of ASFA (post-ASFA effects). For children admitted prior to ASFA (cohorts 1990-1997), the period-specific probability of adoption increased once the children still in care came under the

influence of the new law. The experiences of the 1993 entry cohort provide a useful example. ASFA became effective when members of the 1993 cohort were in their sixth year. The conditional probability of adoption at the point was .23. The experience of early cohorts during the sixth year (pre-ASFA) was lower. The cohorts entering care after 1994 follow a similar pattern. However, we may not attribute the quickened pace of adoption to ASFA alone. For children admitted in the early 1990s, their period-specific probability gained momentum before 1998. Obviously there have been both pre-ASFA and post-ASFA effects. Inasmuch as some of these children were still in care after ASFA was passed, their quicker exit from the system suggests that ASFA may have had the intended impact on the adoption backlog. The hazard ratios reported by the proportional hazard model for each entry cohort also support this conclusion of an acceleration of adoption, but the process started before ASFA became law.

The presence of both pre- and post-ASFA effects raises questions about what other factors might account for the pre-ASFA increase in the speed of adoptions. The strongest pre-ASFA effects were observed in the mid-1990s and involved cohorts admitted during that period as well as children who were admitted earlier in the decade but were still in care at that time. Two explanations come to mind. First, the findings are based on data from states that have very different adoption dynamics (Wulczyn, Brunner & Goerge, 2000). We elected to present the data in aggregate form, even though data from the seven states do not necessarily reflect national trends, because the aggregate view comes closer to a national picture that we assume is helpful to federal policy makers.<sup>16</sup> Nevertheless, individual state differences are an underlying source of variation that might account for the pre-ASFA effect we observed. New York and Illinois, in particular, are two states that addressed adoption issues in advance of ASFA. In 1995, the number of children in foster care in Illinois reached a record level of over 50,000, from 20,000 in 1990.<sup>17</sup> With 17 per 1,000 children in foster care, Illinois had the highest prevalence rate of all states in the country. To curb the growth of the foster care population, Illinois adopted measures to promote adoption as another method of achieving permanency partially in response to the 1996 presidential pledge to double the number of adoptions and permanent placements in 5 years (Duquette, Hardin and Payne 1999). As a result, the number of children adopted increased from just over 1,000 in 1993 to over 2,000 in 1997 and to over 4,000 in 1998.

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<sup>16</sup> It is important to point out here that individual states' differences are a matter of magnitude rather than direction. That is, trends in the states follow the patterns described here, although to varying degrees.

<sup>17</sup> See *Report on Child Safety and Permanency in Illinois for Fiscal Year 1998*, by Children and Family Research Center at University of Chicago at Urbana-Champaign.

ASFA was but one of several federal attempts during the 1990s to change adoption practice. The most notable federal legislation is the Multi-ethnic Placement Act of 1994 (MEPA) and its revision in 1996. It is not possible to conclude that MEPA accounts for the observed pre-ASFA effects without examining the race-specific changes in the time to adoption. In a separate paper, we examined the timing of adoption for children of different races and ethnicities and found that African American children are more likely to be adopted than Caucasian children, although the adoptions take longer to complete. We also found that the pace of adoption involving African American children increased rapidly, leading to smaller differences in the time African American children spend in foster care relative to Caucasian children (Wulczyn, 2003).

There is one more point to mention. The research was designed to ascertain whether ASFA had the intended effect on the adoption process. We found that children who were in care when ASFA was passed did appear to move more quickly, especially those children who may have been part of the adoption backlog. However, the data also reveals a possible slowdown in the reunification process. Although we cannot state with certainty whether reunification became less likely without further analysis, given the broad goals and objectives of ASFA specifically, a slower rate of reunification has to qualify as an unintended consequence. There have been claims that the various incentives stipulated in ASFA for adoption may have led to a de-emphasis of reunification (Chapin Hall Center for Children 2001). Moreover, the impact of slower reunification on foster care trends overall may be as far-reaching as the impact of faster adoptions, perhaps more so given that many more children eventually return home. If reunification of children has been adversely affected by efforts to adopt children more quickly, the systemic factors that influence that trade-off will have to be confronted.

Finally, the readers should be reminded that the population for this research only includes children who entered foster care for the first time. Although some children who were adopted returned to foster care, many more children who exited care through reunification earlier in their placement history ended up being adopted. Therefore, the eventual number of adoptions and likelihood of adoption for each entry cohort should be higher than reported in the current analysis. Furthermore, the relative rate of exit from first and subsequent spells in care may well be different. Our preliminary analysis indicates that adoptions proceed more quickly when the children involved are in a spell of care other than their first. This suggests that a history of prior discharge from foster care and subsequent reentry influence the decision making process in the predicted direction. That is, given a history of multiple entries into placement, the decision to



adopt should be somewhat more defensible in the eyes of the courts and others with an interest in the rights of parents.

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